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# **Rocky Flats Environmental Technology Site**

## **TYPE 1 RECONNAISSANCE LEVEL CHARACTERIZATION REPORT (RLCR)**

### **AREA 5 - GROUP 3 CLOSURE PROJECT (Buildings 119, T119B, 121, 122S, T124A, 127 and 128)**

**REVISION 0**

**June 11, 2003**

**CLASSIFICATION REVIEW NOT REQUIRED PER  
EXEMPTION NUMBER CEX-005-02**



ADMIN RECORD

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109



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RECONNAISSANCE LEVEL CHARACTERIZATION  
REPORT (RLCR)**

**AREA 5 - GROUP 3 CLOSURE PROJECT  
(Buildings 119, T119B, 121, 122S, T124A, 127 and 128)**

**REVISION 0**

**June 11, 2003**

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- A Facility Location Map
- B Historical Site Assessment Report
- C Radiological Data Summaries and Survey Maps
- D Chemical Data Summaries and Sample Maps
- E Data Quality Assessment (DQA) Detail



## ABBREVIATIONS/ACRONYMS

ACM	Asbestos containing material
Be	Beryllium
CDPHE	Colorado Department of Public Health and the Environment
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act
DCGL <sub>EMC</sub>	Derived Concentration Guideline Level – elevated measurement comparison
DCGL <sub>W</sub>	Derived Concentration Guideline Level – Wilcoxon Rank Sum Test
D&D	Decontamination and Decommissioning
DDCP	Decontamination and Decommissioning Characterization Protocol
DOE	U.S. Department of Energy
DPP	Decommissioning Program Plan
DQA	Data quality assessment
DQOs	Data quality objectives
EPA	U.S. Environmental Protection Agency
FDPM	Facility Disposition Program Manual
HVAC	Heating, ventilation, air conditioning
HSAR	Historical Site Assessment Report
IHSS	Individual Hazardous Substance Site
IWCP	Integrated Work Control Package
K-H	Kaiser-Hill
LBP	Lead-based paint
LLW	Low-level waste
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
NORM	Naturally occurring radioactive material
NRA	Non-Rad-Added Verification
OSHA	Occupational Safety and Health Administration
PARCC	Precision, accuracy, representativeness, comparability and completeness
PCBs	Polychlorinated Biphenyls
PDS	Pre-demolition survey
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RFETS	Rocky Flats Environmental Technology Site
RFFO	Rocky Flats Field Office
RLC	Reconnaissance Level Characterization
RLCR	Reconnaissance Level Characterization Report
RSP	Radiological Safety Practices
SVOCs	Semi-volatile organic compounds
TCLP	Toxicity Characteristic Leaching Procedure
TSA	Total surface activity
VOCs	Volatile organic compounds



## EXECUTIVE SUMMARY

A Reconnaissance Level Characterization (RLC) was performed to enable facility "Typing" per the DPP (10/8/98) and compliant disposition and waste management of the Area 5 - Group 3 Facilities (i.e., Buildings 119, T119B, 121, 122S, T124A, 127 and 128). Because these facilities were anticipated Type 1 facilities, the characterization was performed in accordance with the Pre-Demolition Survey Plan (MAN-127-PDSP). All facility surfaces were characterized in this RLC, including the interior and exterior surfaces [i.e., floors (slabs), walls, ceilings and roofs]. Environmental media beneath and surrounding the facilities were not within the scope of this RLCR and will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA.

The RLC encompassed both radiological and chemical characterization to enable compliant disposition and waste management pursuant to the D&D Characterization Protocol (MAN-077-DDCP). The characterization built upon physical, chemical and radiological hazards identified in the facility-specific Historical Site Assessment Report.

Results indicate that no radiological contamination exists in excess of the PDSP unrestricted release limits of DOE Order 5400.5. All beryllium surface smear results were less than  $0.1 \mu\text{g}/100\text{cm}^2$ . Friable asbestos was identified positively from bulk samples of building materials suspected of containing asbestos in Building 121 (plaster and paint on the cinderblock walls – 3% Chrysotile or 1.5 % Chrysotile by point count). Fluorescent light ballasts may contain PCBs. Any PCB ballasts, asbestos containing materials, and hazardous-waste items will be removed and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations. All demolition debris will be managed in compliance with regulations governing PCBs (40 CFR 761), and Environmental Compliance Guidance #27, *Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal*, as applicable. All concrete associated with these facilities meet the criteria for recycling concrete per the RFCA RSOP for Recycling Concrete.

Based upon this RLCR, the Area 5 - Group 3 Facilities are considered Type 1 facilities. To ensure the facilities remain free of contamination and RLC data remain valid, Level 2 Isolation Controls have been established and the facilities posted accordingly.



## **1 INTRODUCTION**

A Reconnaissance Level Characterization (RLC) was performed to enable compliant disposition and waste management of Area 5 - Group 3 Facilities (i.e., Buildings 119, T119B, 121, 122S, T124A, 127 and 128). Because these facilities were anticipated Type 1 facilities, a PDS characterization was performed. All facility surfaces were characterized in this RLC, including the interior and exterior surfaces of the facilities [i.e., floors (slabs), walls, ceilings and roofs]. Environmental media beneath and surrounding the facilities were not within the scope of this RLC Report (RLCR) and will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA.

As part of the Rocky Flats Environmental Technology Site (RFETS) Closure Project, numerous facilities will be removed. Among these are the Area 5 - Group 3 Facilities. The locations of these facilities are shown in Attachment A, *Facility Location Map*. These facilities no longer support the RFETS mission and require removal to reduce Site infrastructure, risks and/or operating costs.

Before these facilities can be removed, a Pre-Demolition Survey (PDS) must be conducted; this document presents the PDS results. The PDS was conducted pursuant to the Decontamination and Decommissioning Characterization Protocol (MAN-077-DDCP) and the Pre-Demolition Survey Plan for D&D Facilities (MAN-127-PDSP). The PDS built upon physical, chemical and radiological hazards identified in the facility-specific Historical Site Assessment Report.

### **1.1 Purpose**

The purpose of this report is to communicate and document the results of the RLC effort. An RLC is performed before Type 1 building demolition to define the pre-demolition radiological and chemical conditions of a facility. Pre-demolition conditions are compared with the release limits for radiological and non-radiological contaminants. RLC results will enable project personnel to make final disposition decisions, develop related worker health and safety controls, and estimate waste volumes by waste types.

### **1.2 Scope**

This report presents the pre-demolition radiological and chemical conditions of the Area 5 - Group 3 Facilities. Environmental media beneath and surrounding the facilities are not within the scope of this RLCR and will be addressed using the Soil Disturbance Permit process in compliance with RFCA.

### **1.3 Data Quality Objectives**

The Data Quality Objectives (DQOs) used in designing this RLC were the same DQOs identified in the Pre-Demolition survey Plan for D&D Facilities (MAN-127-PDSP.) Refer to section 2.0 of MAN-127-PDSP for these DQOs.



## 2 HISTORICAL SITE ASSESSMENT

Facility-specific Historical Site Assessments (HSAs) were conducted to understand facility histories and related hazards. The assessments consisted of facility walk-downs, interviews, and document review, including review of the Historical Release Report (refer to the D&D Characterization Protocol, MAN-077-DDCP). Results were used to identify data gaps and needs, and to develop radiological and chemical characterization packages. Results of the facility-specific HSAs were documented in a facility-specific *Historical Site Assessment Report (HSAR) for Area 5 - Group 3 Facilities*, dated August, 2002, Revision 0 (refer to Attachment B). In summary, the HSAR identified no potential for radiological and chemical hazards, except the potential for asbestos containing materials and PCBs in paint and light ballasts.

## 3 RADIOLOGICAL CHARACTERIZATION AND HAZARDS

The Area 5 - Group 3 Facilities were characterized for radiological hazards per the PDSP. Radiological characterization was performed to define the nature and extent of radioactive materials that may be present on the facility surfaces. Measurements were performed to evaluate the contaminants of concern. Based upon a review of historical and process knowledge, building walk-downs, and MARSSIM guidance, a Radiological Characterization Plan was developed during the planning phase that describes the minimum survey requirements (refer to the RISS Characterization Project files).

Seven radiological survey packages were developed for the interior surfaces and one survey package (EXT-B-001) was developed for the exterior surfaces of the Area 5 - Group 3 Facilities. The eight survey packages were developed in accordance with Radiological Safety Practices (RSP) 16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation and Closure*. Total surface activity (TSA), removable surface activity (RSA), and scan measurements were collected in accordance with RSP 16.02 *Radiological Surveys of Surfaces and Structures*. Radiological survey data were verified, validated and evaluated in accordance with RSP 16.04, *Radiological Survey/Sample Data Analysis*. Quality control measures were implemented relative to the survey process in accordance with RSP 16.05, *Radiological Survey/Sample Quality Control*. Radiological survey data, statistical analysis results, and survey locations are presented in Attachment C, *Radiological Data Summary and Survey Maps*. The radiological survey unit packages are maintained in the RISS Characterization Project files.

239 TSA measurements (117 random, 61 biased, 45 equipment and 16 QC), 223 RSA measurements (117 random, 61 biased, and 45 equipment), and a minimum of 5% of the interior surfaces of the Area 5 - Group 3 facilities were scanned at biased locations. The RLC data confirmed that these facilities do not contain radiological contamination above the surface contamination guidelines provided in the PDSP. Radiological survey data, statistical analysis results, and survey locations are presented in Attachment C, *Radiological Data Summary and Survey Maps*. The radiological survey unit packages are maintained in the RISS Characterization Project files. Level 2 Isolation Control postings are displayed on the buildings to ensure no radioactive materials are inadvertently introduced.



The exterior radiological surveys for the Area 5 - Group 3 Facilities were performed as part of the RISS West Side Exterior PDS strategy effort (authorized by Department of Energy letter, 02-DOE-01598, dated December 13<sup>th</sup>, 2002 and approved by CDPHE letter, *RE: Proposed Deviations From The Pre-Demolition Survey Plan (PDSP)*, dated January 27, 2003; refer to the RISS Characterization Project Files for letter copies). The RISS West Side exterior building radiological surveys and locations can be found in survey unit package EXT-B-001, *RISS West Side Building Exteriors*. Thirteen (13) biased TSA measurements, thirteen (13) biased RSA measurements, and a one (1) square meter scan at each of the thirteen (13) TSA/RSA locations were performed at biased locations on the exterior surfaces of the Area 5 - Group 3 Facilities. Ten percent scan surveys were also performed at biased locations on the concrete, exterior entrance, and dock surfaces of the Area 5 - Group 3 facilities. Two (2) additional TSA and RSA measurements were also collected from these non-structural surfaces. The RLC data collected in exterior survey unit package EXT-B-001 confirmed that the exterior surfaces of these facilities do not contain radiological contamination above the surface contamination guidelines provided in the PDSP. Radiological survey data, statistical analysis results, and survey map locations for the West-Side Exterior survey unit package EXT-B-001 are maintained in the RISS Characterization Project files.

#### 4 CHEMICAL CHARACTERIZATION AND HAZARDS

The Area 5 - Group 3 Facilities were characterized for chemical hazards per the PDSP. Chemical characterization was performed to determine the nature and extent of chemical contamination that may be present on, or in the facilities. Based upon a review of historical and process knowledge, visual inspections, and PDSP DQOs, additional sampling needs were determined. A Chemical Characterization Plan (refer to RISS Characterization Project files) was developed during the planning phase that describes sampling requirements and the justification for the sample locations and estimated number of samples. Contaminants of concern included asbestos, beryllium, RCRA/CERCLA constituents, and PCBs. Refer to Attachment D, *Chemical Data Summaries and Sample Maps*, for details on sample results and sample locations.

##### 4.1 Asbestos

A visual and tactile survey of building materials suspected of containing asbestos was conducted in the aforementioned buildings in accordance with the PDSP. A CDPHE-certified asbestos inspector conducted the inspection and sampling in accordance with the *Asbestos Characterization Protocol, PRO-563-ACPR, Revision 1*.

During the visual and tactile survey of Buildings T119B, 122S, 127, and 128, no building materials suspected of containing asbestos were identified, therefore, no bulk sampling was performed in these facilities as part of this RLC. Friable asbestos containing plaster and paint was identified on the cinderblock walls of Building 121 (3 % Chrysotile or 1.5 % Chrysotile by *Point Count*). All laboratory results of bulk samples of building materials suspected of containing asbestos from Buildings T124A and 119 were "None Detected."



## 4.2 Beryllium (Be)

Based on the HSAR and personnel interviews, these buildings were anticipated Type 1 facilities. There was not, however, adequate historical and process knowledge to conclude that beryllium was not used or stored in these buildings. Therefore, biased beryllium sampling was performed in accordance with the PDSP and the *Beryllium Characterization Procedure, PRO-536-BCPR, Revision 0, September 9, 1999*. Biased sample locations corresponded with the most probable areas of dust accumulation (including beryllium dust), assuming airborne deposition.

All beryllium smear sample results were less than  $0.1 \mu\text{g}/100\text{cm}^2$ . Beryllium laboratory sample data and location maps are contained in Attachment D, *Chemical Data Summaries and Sample Maps*.

## 4.3 RCRA/CERCLA Constituents [including metals and volatile organic compounds (VOCs)]

Based on the HSAR, interviews and facility walk-downs of the Area 5 - Group 3 Facilities, the only record of operations using materials that could lead to RCRA/CERCLA concerns are maintenance/cleaning processes and firearm maintenance in Building 121. There is no evidence that any of these uses has led to contamination and none of the buildings have a history of spills or releases of RCRA/CERCLA regulated materials. Therefore, RCRA/CERCLA constituent sampling was not performed in these facilities as part of this RLC.

Sampling for lead in paint in the Area 5 - Group 3 Facilities was not performed. Environmental Waste Compliance Guidance #27, *Lead-based Paint (LBP) and Lead-based paint Debris Disposal*, states that LBP debris generated outside of currently identified high contamination areas shall be managed as non-hazardous (solid) wastes, and additional analysis for characteristics of hazardous waste derived from LBP is not a requirement for disposal.

The buildings may contain some RCRA regulated items, such as mercury thermostats, fluorescent light bulbs, mercury vapor light bulbs, mercury containing gauges, circuit boards, leaded glass and lead-acid batteries. These items will be removed prior to demolition and managed in accordance with the Colorado Hazardous Waste Act. Also, Tank 288 was the underground fuel storage tank for the generator in Building 127. This tank has been closed and foamed in place. Final disposition of Tank 288 will be managed as part of the Environmental Restoration closure activities that will commence after demolition of the Area 5 - Group 3 Facilities.

## 4.4 Polychlorinated Biphenyls (PCBs)

Based on the HSAR, interviews and facility walk-downs of the Area 5 - Group 3 Facilities, PCB-containing equipment were never present in any of these facilities, making the potential for PCB contamination resulting from spills highly unlikely. Therefore, PCB sampling was not performed in these facilities as part of this RLC.



Based on the age of Buildings 121, 127, and 128 (constructed prior to, or during 1980), paints used are assumed to contain PCBs, and all painted materials will be managed as PCB Bulk Product Waste. Painted concrete surfaces can be used as backfill on site in accordance with approval received from EPA in November 2001 (letter from K. Clough, US EPA Region 8, to J. Legare, DOE RFFO, 8EPR-F, Approval of the Risk-Based Approach for Polychlorinated Biphenyls (PCB)-Based Painted Concrete), provided the concrete meets the unrestricted-release criteria outlined in the Concrete Recycling RSOP. Buildings 119, T119B, 122S and T124A were constructed after 1980 and do not contain PCB paint.

Some of the facilities may contain fluorescent light ballasts containing PCBs. Fluorescent light fixtures will be inspected to identify any PCB ballasts during removal operations. PCB ballasts will be identified based on factors such as labeling (e.g., PCB-containing and non PCB-containing, manufacturer, and date of manufacturing). All ballasts that do not indicate non PCB-containing are assumed to be PCB-containing and, if not leaking or more than 9 pounds, will remain with the building and be disposed of as PCB Bulk Product Waste.

## 5 PHYSICAL HAZARDS

Physical hazards associated with the Area 5 - Group 3 Facilities consist of those common to standard industrial environments and include hazards associated with energized systems, utilities, and trips and falls. There are no unique hazards associated with the facilities. The facilities have been relatively well maintained and are in good physical condition, and therefore, do not present hazards associated with building deterioration. Physical hazards are controlled by the Site Occupational Safety and Industrial Hygiene Program, which is based on OSHA regulations, DOE orders, and standard industry practices.

## 6 DATA QUALITY ASSESSMENT

Data used in making management decisions for decommissioning of the Area 5 - Group 3 Facilities, and consequent waste management, are of adequate quality to support the decisions documented in this report. The data presented in this report (Attachments C and D) were verified and validated relative to DOE quality requirements, applicable EPA guidance, and original DQOs of the project.

In summary, the Verification and Validation (V&V) process corroborates that the following elements of the characterization process are adequate:

- ◆ the *number* of samples and surveys;
- ◆ the *types* of samples and surveys;
- ◆ the sampling/survey process as implemented “in the field”; and,
- ◆ the laboratory analytical process, relative to accuracy and precision considerations.

Details of the DQA are provided in Attachment E.



## 7 DECOMMISSIONING WASTE TYPES AND VOLUME ESTIMATES

The demolition and disposal of the Area 5 - Group 3 Facilities will generate a variety of wastes. Estimated waste types and waste volumes are presented below by facility. All waste can be disposed of as sanitary waste, except asbestos and PCB Bulk Product Waste. There is no radioactive or beryllium waste. Any hazardous waste items (i.e., mercury thermostats, fluorescent light bulbs, mercury vapor light bulbs, mercury containing gauges, circuit boards, leaded glass and lead-acid batteries) will be removed prior to demolition and managed in accordance with the Colorado Hazardous Waste Act. Asbestos and PCB ballasts will be managed pursuant to Site asbestos and PCB abatement and waste management procedures.

Waste Volume Estimates and Material Types - Area 5 - Group 3 Facilities							
Facility	Concrete (cu ft)	Wood (cu ft)	Metal (cu ft)	Corrugated Sheet Metal (cu ft)	Wall Board (cu ft)	ACM (cu ft)	Other Waste (cu ft)
119	5,000	0	2,200	2,900	2,500	0	N/A
T119B	0	3,500	1,500	3,000	4,500	0	N/A
121	7000	0	1,000	0	1,600	9,675 square feet or 806 cubic feet	N/A
122S	100	0	100	100	0	0	N/A
T124A	0	3,500	1,500	3,000	4,500	0	N/A
127	700	0	50	0	0	0	N/A
128	2,500	0	200	0	0	0	N/A

## 8 FACILITY CLASSIFICATION AND CONCLUSIONS

Based on the analysis of radiological, chemical and physical hazards, the Area 5 - Group 3 Facilities (i.e., Buildings 119, T119B, 121, 122S, T124A, 127 & 128) are classified as RFCA Type 1 facilities pursuant to the RFETS Decommissioning Program Plan (DPP; K-H, 1999). The Type 1 classification is based on a review of historical and process knowledge, and newly acquired RLC data.



The RLC of the Area 5 - Group 3 Facilities was performed in accordance with the DDCP and PDSP. All PDSP DQOs were met, and all data satisfied the PDSP DQA criteria. The Area 5 - Group 3 Facilities do not contain radiological or beryllium wastes. Asbestos containing materials and PCB ballasts will be managed and disposed of in compliance with Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE) regulations. Underground fuel storage Tank 288 is not within the scope of this RLCR, however, final disposition of this tank will be managed as part of Environmental Restoration closure activities after demolition of the Area 5 - Group 3 Facilities. All demolition debris will be managed in compliance with regulations governing PCBs (40 CFR 761), and Environmental Compliance Guidance #27, *Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal*, as applicable.

Environmental media beneath and surrounding the facilities will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA. All concrete associated with these facilities meets the criteria for recycling concrete per the RFCA RSOP for Recycling Concrete

To ensure that these Type 1 facilities remain free of contamination and RLC data remain valid, Level 2 Isolation Controls have been established and the facilities posted accordingly.



## 9 REFERENCES

- DOE/RFFO, CDPHE, EPA, 1996. *Rocky Flats Cleanup Agreement (RFCA)*, July 19, 1996.
- DOE Order 5400.5, *"Radiation Protection of the Public and the Environment."*
- EPA, 1994. *"The Data Quality Objective Process,"* EPA QA/G-4.
- K-H, 1999. *Decommissioning Program Plan*, June 21, 1999.
- MAN-131-QAPM, *Kaiser-Hill Team Quality Assurance Program*, Rev. 1, November 1, 2001.
- MAN-076-FDPM, *Facility Disposition Program Manual*, Rev. 3, January 1, 2002.
- MAN-077-DDCP, *Decontamination and Decommissioning Characterization Protocol*, Rev. 3, July 15, 2002.
- MAN-127-PDSP, *Pre-Demolition Survey Plan for D&D Facilities*, Rev. 1, July 15, 2002.
- MARSSIM - *Multi-Agency Radiation Survey and Site Investigation Manual*, December 1997 (NUREG-1575, EPA 402-R-97-016).
- PRO-475-RSP-16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation, and Closure*, Rev. 1, May 22, 2001.
- PRO-476-RSP-16.02, *Pre-Demolition (Final Status) Radiological Surveys of Surfaces and Structures*, Rev. 1, May 22, 2001.
- PRO-477-RSP-16.03, *Radiological Samples of Building Media*, Rev. 1, May 22, 2001.
- PRO-478-RSP-16.04, *Radiological Survey/Sample Data Analysis for Final Status Survey*, Rev. 1, May 22, 2001.
- PRO-479-RSP-16.05, *Radiological Survey/Sample Quality Control for Final Status Survey*, Rev. 1, May 22, 2001.
- PRO-563-ACPR, *Asbestos Characterization Procedure*, Revision 0, August 24, 1999.
- PRO-536-BCPR, *Beryllium Characterization Procedure*, Revision 0, August 24, 1999.
- RFETS, *Environmental Waste Compliance Guidance #25, Management of Polychlorinated Biphenyls (PCBs) in Paint and Other Bulk Product Waste During Facility Disposition.*
- RFETS, *Environmental Waste Compliance Guidance #27, Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal.*
- RFCA Standard Operation Protocol for Recycling Concrete*, September 28, 1999.
- Historical Site Assessment Report for the Area 5 - Group 3 Facilities*, dated August 2002, Revision 0.



# ATTACHMENT A

## Facility Location Map



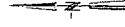
119, 1119B, 121, 122S,  
1124A, 127 & 128

## Standard Map Features

- Buildings and other structures
- Demolished buildings and other structures
- Lakes and ponds
- Streams, ditches, or other drainage features
- Fences and other barriers
- Paved roads
- Dirt roads

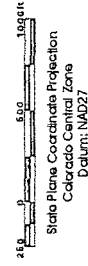
### DATA SOURCE BASE FEATURES:

Buildings, fences, hydrography, roads and other structures from 1994 aerial fly-over data captured by EG&G NSI, Las Vegas. Digitized from the orthophotographs. 1/95



Scale = 1 : 12450

Scale = 1:12450  
1 inch represents approximately 1038 feet



U.S. Department of Energy  
Rocky Flats Environmental Technology Site

GS Dept. 303-966-7707

Prepared by:

774-622-4444

**Prepared for:**



MAP ID: FY2002/02-0888/ASGS/119

June 10, 2003





## ATTACHMENT B

### Historical Site Assessment Report



**D&D RISS Facility Characterization  
Historical Site Assessment Report  
August, 2002 Rev. 0**

**Facility ID: (AREA 5 - GROUP 3) Building 119, T119B, 119H, 121, T121A, 122, 122S, T124A, 127, 128, and T122A.**

Anticipated Facility Type (1, 2, or 3): Building 119, T119B, 119H, 121, T121A, 122, 122S, T124A, 127, and 128 are anticipated Type 1 facilities. Trailer T122A is an anticipated type 2 facility.

This facility-specific Historical Site Assessment (HSA) has been performed in accordance with:  
*D&D Characterization Protocol*, RFETS MAN-077-DDCP, latest version, and  
*Facility Disposition Program Manual*, RFETS MAN-076-FDPM, latest version

**Physical Description**

**Building 119**

Building 119 is an 11,200 sq. ft. WSLLC Fitness Center constructed in 1988. This building is a steel frame structure with insulated metal siding mounted to the steel frame and an insulated metal roof. The building is constructed on a concrete pad. The interior is configured with several support offices and a main fitness center used by WSLLC personnel.

Building 119 has the following utilities: electrical, plant water, plant sanitary, plant steam, and fire protection is provided by an overhead sprinkler system and wall mounted fire extinguishers.

**Trailer T119B**

Trailer T119B is a 15,400 square-foot general field office trailer and was acquired in 1991. This modular trailer is approximately 120-feet wide by 130-feet long. T119B has corrugated metal siding with corrugated metal skirting. The entrances have wooden stairs leading to a wooded enclosure.

The interior is primarily a cubical layout, but has several hard-walled offices, conference rooms, and rest rooms. Interior walls are wallboard, the ceiling is a drop ceiling with acoustical tiles and recessed lights. The floor is primarily covered with carpet except in the bathrooms and dock entrances, which are covered with vinyl tile.

Trailer T119B has the following utilities: electrical, plant water, plant sanitary, and fire protection is provided by an overhead sprinkler system and wall mounted fire extinguishers.

**119H Helicopter Pad**

The 119H Helicopter Pad located south of Trailer T119B were originally an asphalt-paved parking lot constructed in the 1960s. In the 1970s an area where Trailer T119B is located was designated as the 119H Helicopter Pad. The Helicopter Pad was moved approximately 100 feet south to its current location. The 119H Helicopter Pad has no designated square footage, but is estimated to be approximately 2500 sq. ft.

The 119H Helicopter Pad has no utility hook-ups.



**D&D RISS Facility Characterization  
Historical Site Assessment Report  
August, 2002 Rev. 0**

**Building 121**

Building 121 is a 6,530 sq. ft. building constructed in 1953 and has historically housed site security operations. The original portion of building 121 was a poured concrete structure constructed on a concrete pad. The Secondary Alarm Station (SAS) and dispatch area of the building has fortified walls (18-inch thick concrete walls). Building 121 has had several additions built onto the structure during the 1980s. These additions are the locker room on the west-side of the building, and Rooms 112A and 112B to expand the SAS on the east-side of the building. These additions were constructed with concrete block walls and a prefabricated concrete roof, and built on a concrete pad.

Building 121 has the following utilities: electrical, plant water, plant sanitary, plant steam, natural gas, and fire protection is provided by an overhead sprinkler system and wall mounted fire extinguishers.

**Trailer T121A**

Trailer T121A is a 1960 Sq. Ft. office trailer and was acquired in 1985. T121A has corrugated metal siding with corrugated metal skirting. The entrances have wooden stairs leading to a wooded enclosure. The interior is primarily a cubical layout, but has several hard-walled offices. Interior walls are wallboard. The ceiling is a drop ceiling with acoustical tiles and recessed lights. The floor is primarily covered with carpet.

Trailer T121A has the following utilities: electrical, and fire protection is provided by an overhead sprinkler system and wall mounted fire extinguishers.

**Building 122**

Building 122 is an 8600 sq. ft. medical building for Occupational Health and was constructed in 1953. Building 122 is a single-story poured concrete building. There have been several additions to the original structure. In the 1970s the body counting rooms were expanded and an addition was built onto the south side of the building. In the 1990s an administrative section was added to the north side of the structure. The additions were constructed with concrete blocks and prefabricated concrete roof panels. The body counting rooms have specially designed steel walls with lead, tin and zinc shielding to eliminate cosmic radiation. In addition, the X-ray room has lead shielding in the walls.

Building 122 has the following utilities: electrical, plant water, plant sanitary, plant steam, site waste process system (grouted in July 2002), and fire protection is provided by an overhead sprinkler system and wall mounted fire extinguishers.

**Building 122S**

Emergency Power Switchgear/Shredder is a 222 sq. ft. structure built in 1983. Building 122S is steel frame building with metal walls and roof, and is constructed on a concrete pad.

Building 122S has the following utilities: electrical and fire protection is provided by wall mounted fire extinguishers.



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**Trailer T124A**

T124A is a 15,400 square-foot general office trailer and was acquired in 1991. This modular trailer is approximately 120-feet wide by 130-feet long. T124A has corrugated metal siding with corrugated metal skirting. The entrances have wooden stairs leading to a wooded enclosure.

The interior is primarily a cubical layout, but has several hard walled offices, conference rooms, and rest rooms. Interior walls are wallboard. The ceiling is a drop ceiling with acoustical tiles and recessed lights. The floor is primarily covered with carpet except in the bathrooms and dock entranceways, which are covered with vinyl tile.

Trailer T124A has the following utilities: electrical, plant water, plant sanitary, and fire protection is provided by an overhead sprinkler system and wall mounted fire extinguishers.

**Trailer T122A**

Trailer T122A is a 320 sq. ft. Mobile Decontamination Trailer, acquired in 1997. T122A has sheet metal siding, skirting and roofing. The interior is a water-resistant wallboard and the floor has a rubberized covering. The trailer has process water storage tanks located under the trailer. The trailer also has propane tanks under the trailer to fuel the hot water heater.

Trailer T122A has the following utilities: electrical, plant water, propane, and fire protection is provided by and wall mounted fire extinguishers.

**Building 127**

Building 127 houses the emergency generator for Building 121. Building 127 is a 504 sq. ft. building constructed in 1973. Building 127 is a single story concrete block building, prefabricated concrete roof, constructed on a concrete pad.

Building 127 has the following utilities: electrical, and fire protection is provided by an overhead sprinkler system and wall mounted fire extinguishers.

**Building 128**

Building 128 is the vehicle shelter for the site security vehicles. Building 128 is a 2448 sq. ft. building constructed in 1980. This building is an non-insulated concrete block building with a prefabricated concrete panel roof constructed on a concrete pad.

Building 128 has the following utilities: electrical, and fire protection is provided by wall mounted fire extinguishers.



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**Historical Operations**

**Building 119**

Originally, Building 119 housed the Fitness Center (on the north end of the building) and the site Alarm Maintenance Group (on the south end of the building). Approximately seven years ago, the site Alarm Maintenance Group moved out of the building and the Fitness Center was expanded to occupy the entire building. With the exception of Room 111, which houses the site Lock and Key Organization.

The site Alarm Maintenance group use sealed sources to test their equipment. There was no history of any sealed sources leaking and no evidence of any building contamination associated with this activity.

**Trailer T119B**

Trailer T119B has historically been used as a general office trailer by site security personnel. This trailer has no history of radiological or hazardous operations.

**119H Helicopter Pad**

The 119H helicopter Pad was used to support emergency evacuation of personnel. The pad has no history of radiological or hazardous operations. The concrete pad on the east side of the 119H Helicopter Pad was the foundation for an old bus stop/shelter.

**Building 121**

Building 121 was originally constructed as the site security building and contains the administrative offices, the armory, the Secondary Alarm Station (SAS) and site dispatch operations. SAS operations use a large amount of electric security equipment. This security equipment is regularly undated and frequently required minor building modifications for installation of new equipment. Building 121 is also used to clean, repair, and inspect firearms. Firearms cleaning was primarily performed in rooms 108 and 101. The firearms cleaning activities used small volumes of solvents and lubricants. These solvents and lubricants are normally applied to a rag and then used to clean the firearms. There has never been a reportable spill associated with the firearms cleaning activity. Occasionally, during the route surveys of Building 121, very low levels of contamination tracked in on the shoes of security guards working inside the PAA was found. This contamination was always cleaned-up at the time of detection.

A small natural gas powered incinerator was in operation on the south side of the building from 1953 until it was removed in the early 1980s. The incinerator was used to incinerate classified documents.

**Trailer T121A**

Trailer T121A has historically been used as a general administrative office trailer by several organizations such as site security. In 1996, T121A was used by the Health Physics organization to inspect and service Health physics instruments. Currently T121A only performs inspection and testing on health physics interments, which include hand probes and combination hand/foot probs. Prior to receipt of health physics equipment by Trailer T121A, the equipment is surveyed and certified to be contamination free by the user. Sources used to test these instruments are stored in cabinets in Room 01. Routine surveys indicate that there is no building contamination associated with this activity. Hazardous material generated during this activity consisted mostly of spent batteries and disposal of instrument components. See The Trailer T121A WSRIC for a more detailed explanation of the waste stream from Trailer 121A.



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**Building 122**

Building 122 contains emergency medical services, personnel decontamination equipment, gamma counting operations, medical/infectious waste treatment, and administrative offices. Major waste-generating processes in this building include X-ray development and medical/infectious waste generation. The wastes include fixers, developers, decontamination water, and medical waste. Spent fixers are collected in a satellite collection area. Developers are washed down the sanitary drain. Decontamination water was released to a process waste system and sent to Building 374 for treatment. In July 2002 the process waste drains in the building were grouted. Medical/infectious wastes are segregated as low-level or non-radioactive wastes. Non-radioactive medical wastes are placed in a vendor-supplied container for offsite disposal. Low-level medical wastes are placed in an appropriate container after treatment to render them non-infectious.

The body counting rooms and the x-ray room have lead shielding in the walls. Sources are stored in room 128D. There is no history of any sources leaking. Room 109 is used to develop x-rays and the solution is collected in a satellite accumulation area in Room 109.

Building 122 was also used to decontaminate injured site personnel. The most notable event occurred in 1964 when the entryway and some of the support rooms were contaminated with low levels of Pu. The contamination was the result of treating and decontaminating a contaminated worker from Building 776. The building was decontaminated using damp wiping and other abrasive techniques. Some of the floor tiles in the effect areas were replaced and a new floor was installed in the original shower area.

The cadaver table in room 119 and the new decontamination showers in Room 127A have a fixed contamination label on them.

Building 122 was never connected to the original waste process system. Process waste from Building 122 drained to an above ground tank (T1) located at the southeast corner of the building. Process waste from Tank T1 was pumped to a truck and transported to 774 for treatment. When the new waste transfer system was installed in the late 1970s a connection was made to the building's process waste system. Tank T1 was removed in the early 1980s.

**Trailer 122A**

Trailer 122A is the Mobile Decontamination Trailer and was originally anticipated as type 2 facility. It is anticipated that little or no facility contamination will be found in this trailer. This trailer is used to decontaminate injured and potentially contaminated personnel. T122A has several containers labeled radiological material for holding potentially contaminated PPE and decontamination waste. Due to the use of water resistant and rubberized materials on the interior of this decontamination trailer, little facility contamination is expected during the RLCR process. When the process waste tanks under the trailer are full, the wastewater was transferred to the process waste system using a pump located in Building 122. In July 2002 the process waste drains in Building 122 were grouted. Process Waste from T122A will need to be trucked to Building 374 for treatment.

**Building 122S**

Building 122S houses the switchgear equipment for the emergency generator and, in the past housed the shredder used to shred classified documents. The shredder was operational from mid 1980s to the late 1980s. The shredder has since been removed. The area that housed the shredder is now used as a general storage area.



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**Trailer T124A**

Trailer T124A has historically been used as a general office trailer and has housed such organizations as DOE, CDPHE, Forrest Service, Safe Sites management personnel and RFCSS management personnel. Trailer T124A has never housed any radiological or hazardous operation.

**Building 127**

Building 127 is the emergency generator for Buildings 121 and 122. This building has always been an emergency generator. Tank 288 is the old underground fuel tank for Building 127. Tank 288 has been closed and is foamed in place. Building 127 has never housed any radiological or hazardous operation. Maintenance waste includes batteries, used oil and ethylene glycol that are disposed of by Building 334 maintenance personnel.

**Building 128**

Building 128 is a vehicle shelter for plant protection vehicles and stores security supplies such as radios, belts, and boots. There is no history of any radiological or hazardous operations. No vehicle maintenance was performed in Building 128.

**Current Operational Status**

Building 119, T119B, 119H, 121, T121A 122, T122A, 122S, T124A, 127, and 128 are all operational.

**Contaminants of Concern**

**Asbestos**

*Describe any potential, likely, or known sources of Asbestos:*

Buildings 121, 122, 122S and 127 are posted as potentially containing asbestos. The Industrial Hygiene Group (IH) has collected some asbestos data on Buildings 121 and 122. Contact IH for a copy of this information.

**Beryllium (Be)**

*Describe any potential, likely, or known Be production or storage locations:*

None of the buildings addressed in this HSA are on the List of known Be Areas.

*Summarize any recent Be sampling results:*

There have been no recent Be samples collected on any of these facilities.

**Lead**

*Describe any potential, likely, or known sources of Lead (e.g., paint, shielding, etc.):*

Based on the age of some of the facilities addressed in this HSA, lead in paint may be a concern. No processes containing lead were conducted in these facilities. The body counting rooms and the x-ray room in Building 122 have lead shielding in the walls.



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**RCRA/CERCLA Constituents**

*Describe any potential, likely, or known sources of RCRA/CERCLA constituents (e.g., chemical storage, waste storage, and processes):*

See the Historical Operation Section above for facilities with operations that evolve RCRA/CERCLA constituents.

*Describe any potential, likely, or known spill locations (and sources, if any):*

None of the facilities in this HSA have had any RCRA/CERCLA spills.

*Describe methods in which spills were mitigated, if any:*

None of the facilities in this HSA have had any RCRA/CERCLA spills.

**PCBs**

*Describe any potential, likely, or known sources of PCBs (e.g., light ballasts, paints, equipment, etc.):*

No PCB containing process where housed in any of the facilities addressed in this HSA. Based on the age of construction of some of these facilities, PCBs in paint may be an issue.

*Describe any potential, likely, or known spill locations (and sources, if any):*

No PCB spills occurred in any of the facilities addressed in this HSA.

*Describe methods in which spills were mitigated, if any:*

No PCB spills occurred in any of the facilities addressed in this HSA.



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**Radiological Contaminants**

*Describe any potential, likely, or known radiological production or storage locations:*

None of the Buildings in this HSA are radiological posted. However, the entry and several of the supporting rooms in Building 122 were contaminated during the incident involving a Building 776 worked in 1964 and were cleaned to the standards of the day. The shower and cadaver table in Building 122 have fixed contamination labels. See the historical operation section above for more details on other minor radiological issues related to Building 121 and 122. Several of the facilities addressed in this HSA have stored sealed sources, but none have had a history of leaking.

*Describe any potential, likely, or known spill locations (e.g., known leaking sealed radioactive sources, leaking waste drums, potentially contaminated drains, etc.):*

Except as noted in the historical operations section above no radiological material has been stored or handled in any of the facilities addressed in this HSA.

*Describe methods in which spills were mitigated, if any:*

See Historical operation section above for details related to the 1964 contamination of Building 122.

*Describe any potential, likely, or known isotopes of concern (e.g., weapons grade plutonium, uranium isotopes, pure beta emitters, mixed fission products, etc.):*

Isotopes of concern include uranium and plutonium.

*Describe any potential, likely, or known external facility contamination (e.g., stack release points, unfiltered ventilation, facility's physical location to known site releases, etc.):*

See section below for information on IHSSs PACs, and UBCs.

**Environmental Restoration Concerns**

*Describe any ER concerns that could affect facility characterization (e.g., IHSSs, PACs, UBCs):*

Building 119 is located near the following PAC:

- 1) PAC 100-612 "Battery Solution spill", NFA approved in 1992

Building 121 is located next to the following PAC:

- 1) PAC 100-609 "Building 121 Security Incinerator", Active.

Building 121 has a partial UBC under the southern portion of the building.

The remainder of the facilities addressed in this HSA are not associated with any IHSSs, PACs, or UBCs.



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## Additional Information

Describe any additional information that may be useful during facility characterization (e.g., contaminant migration routes, waste handling operations, physical hazards, Historical Release Reports, WSRIC data, etc.):

None

## References

Provide all sources of information utilized to gather data for facility history (e.g., documents, files, interviews):

Sources reviewed to complete this HSA were the RFETS Facility List, the Historical Release Report, Site Master List of RCRA Units, and the Site IHSS, PAC, and UBC databases. The WSRIC for those buildings with a WSRIC. In addition, a facility walkdown and interviews were performed.

## Waste Volume Estimates and Material Types

Facility	Concrete (cu ft)	Wood (cu ft)	Metal (cu ft)	Corrugated Sheet Metal (cu ft)	Wall Board (cu ft)	ACM (cu ft)	Other Waste (cu ft)
<b>Building 119</b>	5000	0	2200	2900	2500	TBD	N/A
<b>Trailer T119B</b>	0	3500	1500	3000	4500	TBD	N/A
<b>Building 119H</b>	0	0	0	0	0	TBD	Asphalt - 1200
<b>Building 121</b>	7000	0	1000	0	1600	TBD	N/A
<b>Trailer T121A</b>	0	700	700	750	800	TBD	N/A
<b>Building 122</b>	8200	0	1100	0	2500	TBD	N/A
<b>Building 122S</b>	100	0	100	100	0	TBD	N/A
<b>Trailer T124A</b>	0	3500	1500	3000	4500	TBD	N/A
<b>Building 127</b>	700	0	50	0	0	TBD	N/A
<b>Building 128</b>	2500	0	200	0	0	TBD	N/A
<b>Trailer T122A</b>	0	0	100	250	200	TBD	N/A

## Further Actions

Recommend any further actions, if any (e.g., characterization, decontamination, special handling, etc.):

Begin the RLC/PDS process.

## Note:

This HSA was performed prior to SME walkdowns, and chemical and radiological characterization package preparations. SMEs should evaluate and/or verify all information during the RLC/PDS process. SMEs may need to review additional documentation and perform additional interviews. Information contained in this HSA only represents a "snapshot" in time. Subsequent data may be obtained during SME walkdowns and chemical and radiological characterization package preparations, which may conflict with this report. However, this report will not be amended, and the newer data will take precedence over the data in this report. Newer Data will appear in the RLCP/PDSR.

Prepared By: Doug Bryant / /s/ / August 2002  
Name Signature Date



## ATTACHMENT C

### Radiological Data Summaries and Survey Maps



**SURVEY UNIT 119-5-001**  
**RADIOLOGICAL DATA SUMMARY - PDS**

**Survey Unit Description: B119 (Interior)**



119-5-001  
PDS Data Summary

<u>Total Surface Activity Measurements</u>			<u>Removable Activity Measurements</u>		
	30	30		30	
	Number Required	Number Obtained		Number Required	Number Obtained
MIN	-11.6	dpm/100 cm <sup>2</sup>	MIN	-1.2	dpm/100 cm <sup>2</sup>
MAX	60.8	dpm/100 cm <sup>2</sup>	MAX	6.4	dpm/100 cm <sup>2</sup>
MEAN	6.6	dpm/100 cm <sup>2</sup>	MEAN	0.7	dpm/100 cm <sup>2</sup>
STD DEV	14.2	dpm/100 cm <sup>2</sup>	STD DEV	1.7	dpm/100 cm <sup>2</sup>
TRANSURANIC DCGL <sub>w</sub>	100	dpm/100 cm <sup>2</sup>	TRANSURANIC DCGL <sub>w</sub>	20	dpm/100 cm <sup>2</sup>



**SURVEY UNIT 119-5-001  
TSA - DATA SUMMARY**

<b>Manufacturer:</b>	NE Tech	NE Tech	NE Tech	NE Tech	NE Tech
<b>Model:</b>	DP-6	DP-6	DP-6	DP-6	DP-6
<b>Instrument ID#:</b>	1	2	3	4	5
<b>Serial #:</b>	1681	3114	1417	1420	3115
<b>Cal Due Date:</b>	10/18/03	9/3/03	7/28/03	6/4/03	9/24/03
<b>Analysis Date:</b>	5/19/03	5/19/03	5/19/03	5/19/03	5/19/03
<b>Alpha Eff. (c/d):</b>	0.218	0.219	0.218	0.221	0.218
<b>Alpha Bkgd (cpm)</b>	0.0	2.7	3.3	2.7	4.0
<b>Sample Time (min)</b>	1.5	1.5	1.5	1.5	1.5
<b>LAB Time (min)</b>	1.5	1.5	1.5	1.5	1.5
<b>MDC (dpm/100cm<sup>2</sup>)</b>	48.0	48.0	48.0	48.0	48.0

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm2)	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm2)	Sample Net Activity (dpm/100cm2) <sup>1,2</sup>
1	2	10.0	45.7	4.7	21.5	30.9
2	3	4.0	18.3	6.7	30.7	3.6
3	3	8.7	39.9	5.3	24.3	25.1
4	3	5.3	24.3	2.0	9.2	9.6
5	3	4.0	18.3	2.7	12.4	3.6
6	2	6.0	27.4	6.7	30.6	12.6
7	3	2.7	12.4	3.3	15.1	-2.4
8	5	1.7	7.8	2.0	9.2	-7.0
9	3	4.0	18.3	5.3	24.3	3.6
10	3	3.3	15.1	2.0	9.2	0.4
11	3	8.0	36.7	4.7	21.6	21.9
12	5	6.7	30.7	2.7	12.4	16.0
13	1	4.0	18.3	5.3	24.3	3.6
14	1	4.7	21.6	3.3	15.1	6.8
15	2	3.3	15.1	5.3	24.2	0.3
16	5	3.3	15.1	1.3	6.0	0.4
17	5	4.7	21.6	2.7	12.4	6.8
18	5	2.0	9.2	2.0	9.2	-5.6
19	5	2.0	9.2	0.7	3.2	-5.6
20	4	4.0	18.1	2.0	9.0	3.3
21	4	5.3	24.0	6.0	27.1	9.2
22	3	0.7	3.2	2.0	9.2	-11.6
23	3	3.3	15.1	2.0	9.2	0.4
24	3	1.3	6.0	1.3	6.0	-8.8
25	3	1.3	6.0	2.0	9.2	-8.8
26	5	6.0	27.5	2.7	12.4	12.8



**SURVEY UNIT 119-5-001  
TSA - DATA SUMMARY**

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm2)	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm2)	Sample Net Activity (dpm/100cm2) <sup>1,2</sup>
27	5	4.7	21.6	4.7	21.6	6.8
28	4	16.7	75.6	2.7	12.2	60.8
29	4	4.0	18.1	0.7	3.2	3.3
30	4	4.7	21.3	2.0	9.0	6.5

1 - Average LAB used to subtract from Gross Sample Activity

14.8	Sample LAB Average
MIN	-11.6
MAX	60.8
MEAN	6.6
SD	14.2
Transuranic DCGL <sub>av</sub>	100

**QC Measurements**

28 QC	3	12.0	55.0	2.0	9.2	43.0
4 QC	4	2.7	12.2	3.3	14.9	0.2

1 - Average QC LAB used to subtract from Gross Sample Activity

12.1	QC LAB Average
MIN	0.2
MAX	43.0
MEAN	21.6
Transuranic DCGL <sub>av</sub>	100



**SURVEY UNIT 119-5-001  
RSC - DATA SUMMARY**

<b>Manufacturer:</b>	Eberline	Eberline	Eberline	Eberline
<b>Model:</b>	SAC-4	SAC-4	SAC-4	SAC-4
<b>Instrument ID#:</b>	6	7	8	9
<b>Serial #:</b>	1164	952	971	924
<b>Cal Due Date:</b>	6/17/03	7/9/03	8/6/03	10/23/03
<b>Analysis Date:</b>	5/19/03	5/19/03	5/19/03	5/19/03
<b>Alpha Eff. (c/d):</b>	0.33	0.33	0.33	0.33
<b>Alpha Bkgd (cpm)</b>	0.2	0.4	0.0	0.1
<b>Sample Time (min)</b>	2	2	2	2
<b>Bkgd Time (min)</b>	10	10	10	10
<b>MDC (dpm/100cm<sup>2</sup>)</b>	9.0	9.0	9.0	9.0

Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm <sup>2</sup> )
1	7	1	0.3
2	7	1	0.3
3	9	1	1.5
4	6	2	2.4
5	9	1	1.5
6	6	0	-0.6
7	8	0	0.0
8	6	1	0.9
9	8	1	1.5
10	8	1	1.5
11	7	0	-1.2
12	9	0	0.0
13	7	5	6.4
14	8	0	0.0
15	6	0	-0.6
16	7	1	0.3
17	9	1	1.5
18	8	0	0.0
19	6	0	-0.6
20	7	4	4.8
21	8	0	0.0
22	9	0	0.0
23	6	0	-0.6
24	7	0	-1.2
25	8	0	0.0
26	6	2	2.4
27	9	0	0.0
28	9	1	1.5
29	6	0	-0.6
30	7	1	0.3
		MIN	-1.2
		MAX	6.4
		MEAN	0.7
		SD	1.7
		Transuranic DCGL <sub>W</sub>	20

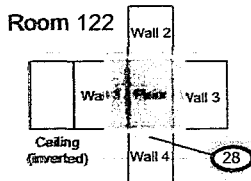
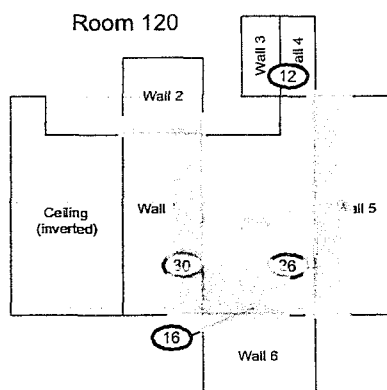
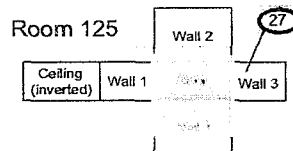
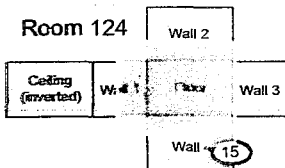
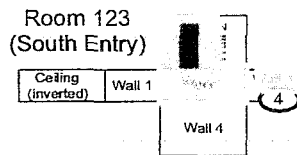
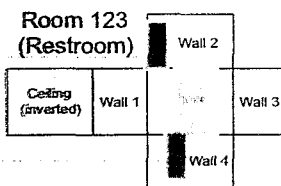
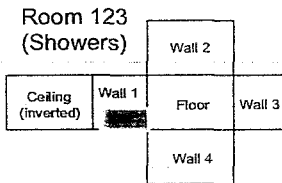
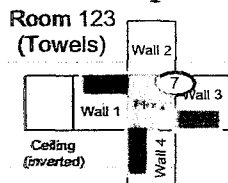
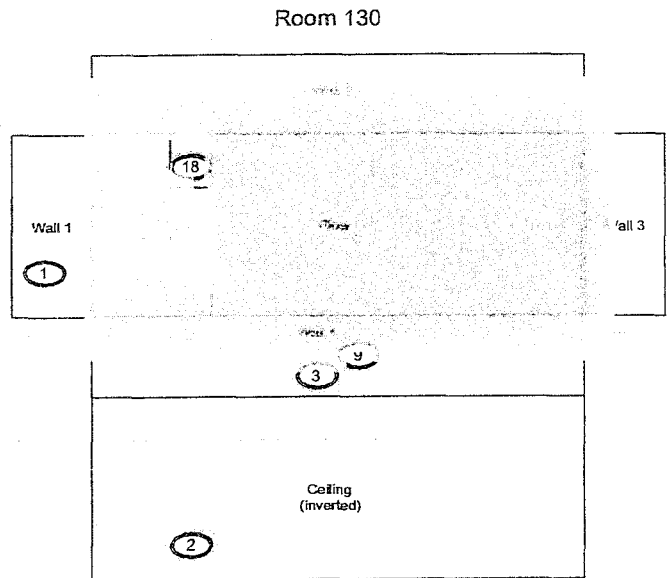
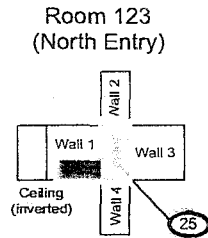
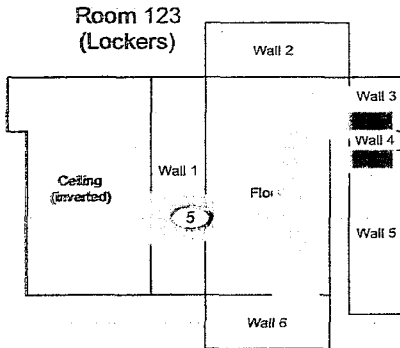


# PRE-DEMOLITION SURVEY FOR 119 BUILDING

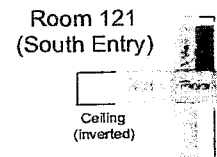
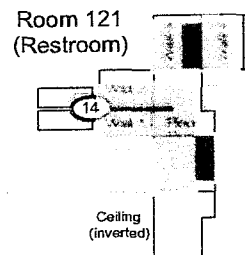
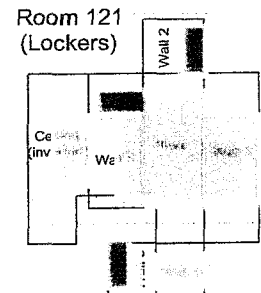
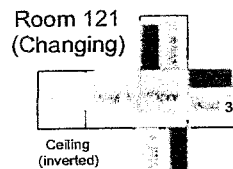
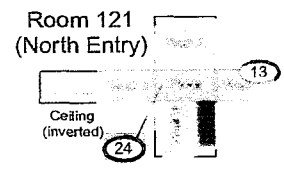
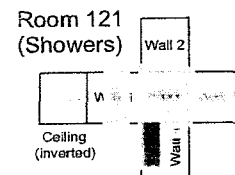
Survey Area: 5      Survey Unit: 119-5-001      Classification: 3  
 Building: 119  
 Survey Unit Description: Building 119 (Interior)  
 Total Area: 3461 sq. m.      Total Floor Area: 965 sq. m.

PAGE 1 OF 2

## Men's Locker Area (123)



## Women's Locker Area (121)

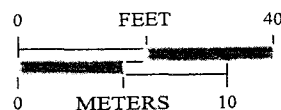


Scan Area

### SURVEY MAP LEGEND

- Sensor & TSA Location
- ◆ Sensor, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

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1 inch = 30 feet 1 grid sq. = 1 sq. m.

### Scan Survey Information

Survey Instrument ID #(s) & RCT ID #(s):  
 1, 2, 3, 4, 5

U.S. Department of Energy  
 Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

Prepared for:

CH2M HILL  
 Communications Group



MAP ID: 02-0888/B119-IN1-SC

May 29, 2003



**SURVEY MAP LEGEND**

- Area in Another Survey Unit
- Open/Inaccessible Area
- Survey, TSA & Sample Location
- Survey & TSA Location

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**Scan Survey Information**

Survey Instrument ID #(s) & RCT ID #(s): 1, 2, 3, 4, 5

1 inch = 30 feet 1 grid sq. = 1 sq. m.

0 10 40 METERS

0 40 FEET

N

MAP ID: 02-0888/B119-INZ-SC

CH2M HILL Communications Group

Prepared by: GIS Dept. 303-966-7707

May 30, 2003

**PRE-DEMOLITION SURVEY FOR 119 BUILDING**

Survey Unit: 119-5-001

Classification: 3

Building: 119

Survey Unit Description: Building 119 (interior)

Total Area: 3461 sq. m.

Total Floor Area: 965 sq. m.

PAGE 2 OF 2



**SURVEY UNIT T119B-5-002**  
**RADIOLOGICAL DATA SUMMARY - PDS**

**Survey Unit Description: T119B (Interior)**



T119B-5-002  
PDS Data Summary

**Total Surface Activity Measurements**

	36	42
	Number Required	Number Obtained
MIN	-11.1	dpm/100 cm <sup>2</sup>
MAX	16.4	dpm/100 cm <sup>2</sup>
MEAN	2.0	dpm/100 cm <sup>2</sup>
STD DEV	7.7	dpm/100 cm <sup>2</sup>
TRANSURANIC DCGL <sub>w</sub>	100	dpm/100 cm <sup>2</sup>

**Removable Activity Measurements**

	36	42
	Number Required	Number Obtained
MIN	-1.5	dpm/100 cm <sup>2</sup>
MAX	4.2	dpm/100 cm <sup>2</sup>
MEAN	-0.1	dpm/100 cm <sup>2</sup>
STD DEV	1.3	dpm/100 cm <sup>2</sup>
TRANSURANIC DCGL <sub>w</sub>	20	dpm/100 cm <sup>2</sup>



**SURVEY UNIT T119B-5-002  
TSA - DATA SUMMARY**

Manufacturer:	NE Tech	NE Tech	NE Tech	NE Tech	NE Tech	NE Tech
Model:	DP-6	DP-6	DP-6	DP-6	DP-6	DP-6
Instrument ID#:	1	3	4	5	10	11
Serial #:	1681	1417	1417	1681	1417	1136
Cal Due Date:	10/18/03	7/28/03	7/28/03	10/18/03	7/28/03	7/8/03
Analysis Date:	5/20/03	5/20/03	5/21/03	5/21/03	6/9/03	6/9/03
Alpha Eff. (c/d):	0.218	0.218	0.218	0.218	0.218	0.217
Alpha Bkgd (cpm)	2.7	2.7	2.0	2.7	0.7	3.3
Sample Time (min)	1.5	1.5	1.5	1.5	1.5	1.5
LAB Time (min)	1.5	1.5	1.5	1.5	1.5	1.5
MDC (dpm/100cm <sup>2</sup> )	48.0	48.0	48.0	48.0	48.0	48.0

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm <sup>2</sup> )	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm <sup>2</sup> )	Sample Net Activity (dpm/100cm <sup>2</sup> ) <sup>1,2</sup>
1	1	2.7	12.4	4.7	21.6	1.3
2	3	2.0	9.2	0.0	0.0	-1.9
3	4	0.7	3.2	1.3	6.0	-7.9
4	5	2.0	9.2	2.7	12.4	-1.9
5	1	1.3	6.0	4.7	21.6	-5.2
6	1	2.7	12.4	4.7	21.6	1.3
7	1	1.3	6.0	0.7	3.2	-5.2
8	1	3.3	15.1	3.3	15.1	4.0
9	5	6.0	27.5	5.3	24.3	16.4
10	4	2.0	9.2	2.0	9.2	-1.9
11	4	2.7	12.4	1.3	6.0	1.3
12	3	2.7	12.4	3.3	15.1	1.3
13	4	4.7	21.6	0.7	3.2	10.4
14	1	0.7	3.2	1.3	6.0	-7.9
15	4	2.0	9.2	1.3	6.0	-1.9
16	1	2.7	12.4	2.7	12.4	1.3
17	3	4.0	18.3	1.3	6.0	7.2
18	1	5.3	24.3	3.3	15.1	13.2
19	3	0.0	0.0	0.0	0.0	-11.1
20	3	4.7	21.6	1.3	6.0	10.4
21	3	1.3	6.0	1.3	6.0	-5.2
22	3	2.0	9.2	2.7	12.4	-1.9
23	1	4.0	18.3	4.0	18.3	7.2
24	3	2.7	12.4	1.3	6.0	1.3
25	1	4.0	18.3	4.0	18.3	7.2
26	3	0.0	0.0	1.3	6.0	-11.1
27	1	4.7	21.6	1.3	6.0	10.4
28	3	0.7	3.2	0.7	3.2	-7.9
29	3	2.0	9.2	2.0	9.2	-1.9
30	1	3.3	15.1	2.0	9.2	4.0



**SURVEY UNIT T119B-5-002  
TSA - DATA SUMMARY**

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm2)	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm2)	Sample Net Activity (dpm/100cm2) <sup>1,2</sup>
31	3	0.7	3.2	0.7	3.2	-7.9
32	1	4.7	21.6	3.3	15.1	10.4
33	3	4.7	21.6	2.0	9.2	10.4
34	1	5.3	24.3	4.0	18.3	13.2
35	3	4.0	18.3	4.0	18.3	7.2
36	1	6.0	27.5	4.7	21.6	16.4
37	10	2.7	12.4	4.7	21.6	1.3
38	10	6.0	27.5	3.3	15.1	16.4
39	10	2.7	12.4	2.7	12.4	1.3
40	10	2.0	9.2	3.3	15.1	-1.9
41	10	2.0	9.2	1.3	6.0	-1.9
42	10	1.3	6.0	1.3	6.0	-5.2

1 - Average LAB used to subtract from Gross Sample Activity

11.1	Sample LAB Average
MIN	-11.1
MAX	16.4
MEAN	2.0
SD	7.7
Transuranic DCGL <sub>w</sub>	100

**QC Measurements**

17 QC	1	4.7	21.6	1.3	6.0	12.4
20 QC	1	4.0	18.3	2.0	9.2	9.2
38 QC	11	3.3	15.2	2.7	12.4	6.0

1 - Average QC LAB used to subtract from Gross Sample Activity

9.2	QC LAB Average
MIN	6.0
MAX	12.4
MEAN	9.2
Transuranic DCGL <sub>w</sub>	100



**SURVEY UNIT T119B-5-002  
RSC - DATA SUMMARY**

<b>Manufacturer:</b>	Eberline	Eberline	Eberline	Eberline	Eberline
<b>Model:</b>	SAC-4	SAC-4	SAC-4	SAC-4	SAC-4
<b>Instrument ID#:</b>	6	7	8	9	12
<b>Serial #:</b>	959	952	971	924	924
<b>Cal Due Date:</b>	7/9/03	7/9/03	8/6/03	10/23/03	10/23/03
<b>Analysis Date:</b>	5/22/03	5/22/03	5/22/03	5/22/03	6/9/03
<b>Alpha Eff. (c/d):</b>	0.33	0.33	0.33	0.33	0.33
<b>Alpha Bkgd (cpm)</b>	0.3	0.5	0.2	0.3	0.1
<b>Sample Time (min)</b>	2	2	2	2	2
<b>Bkgd Time (min)</b>	10	10	10	10	10
<b>MDC (dpm/100cm<sup>2</sup>)</b>	9.0	9.0	9.0	9.0	9.0

Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm <sup>2</sup> )
1	6	0	-0.9
2	7	0	-1.5
3	8	1	0.9
4	9	1	0.9
5	6	0	-0.9
6	7	0	-1.5
7	8	1	0.9
8	9	0	-0.6
9	6	0	-0.9
10	7	3	3.0
11	8	0	-0.6
12	9	0	-0.6
13	6	0	-0.9
14	7	2	1.5
15	8	0	-0.6
16	9	1	0.9
17	6	0	-0.9
18	7	0	-1.5
19	8	0	-0.6
20	9	0	-0.6
21	6	0	-0.9
22	7	1	0.9
23	8	0	-0.6
24	9	0	-0.6
25	6	1	0.6
26	7	2	1.5
27	8	0	-0.6
28	9	0	-0.6
29	6	0	-0.9
30	7	0	-1.5
31	8	0	-0.6
32	9	0	-0.6
33	8	0	-0.6
34	9	1	0.9
35	8	0	-0.6
36	9	1	0.9
37	12	0	-0.3
38	12	2	2.7
39	12	0	-0.3
40	12	0	-0.3
41	12	0	-0.3
42	12	3	4.2
		MIN	-1.5
		MAX	4.2
		MEAN	-0.1
		SD	1.3
		Transuranic DCGL <sub>w</sub>	20

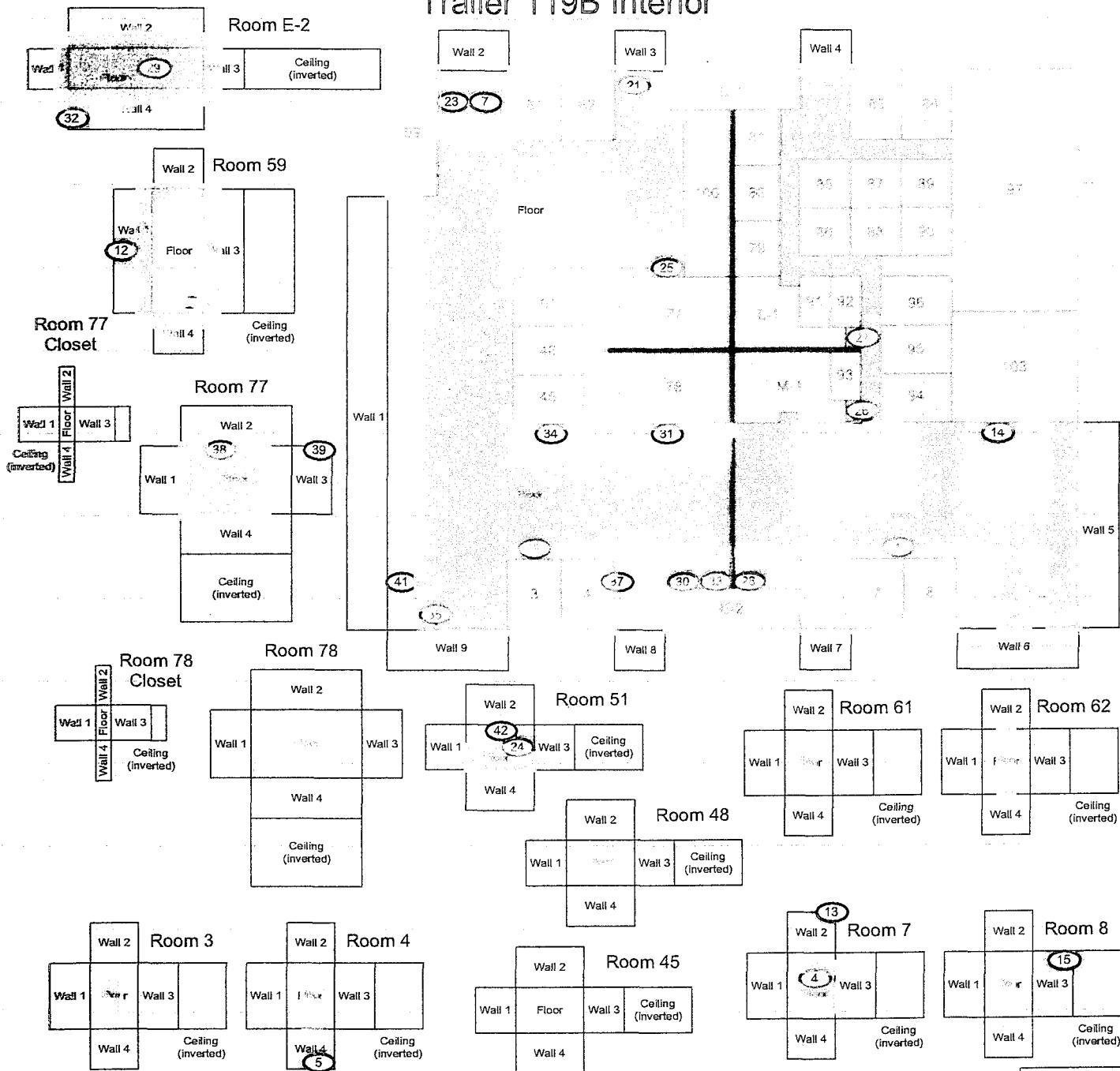


# PRE-DEMOLITION SURVEY FOR T119B BUILDING

Survey Area: 5      Survey Unit: T119B-5-002      Classification: 3  
 Building: T119B  
 Survey Unit Description: Trailer T119 (Interior)  
 Total Area: 4762 sq. m.      Total Floor Area: 1362 sq. m.

PAGE 1 OF 3

## Trailer 119B Interior



<b>SURVEY MAP LEGEND</b> (S) Smear & TSA Location (S) Smear, TSA & Sample Location (X) Open/Inaccessible Area ( ) Area in Another Location	Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.  <b>Scan Survey Information</b> Survey Instrument ID #(s) & RCT ID #(s): 1, 2, 3, 4, 5	N ↑ 0 40 FEET 0 10 METERS 1 inch = 30 feet 1 grid sq. = 1 sq. m.	U.S. Department of Energy Rocky Flats Environmental Technology Site Prepared by: GIS Dept. 303-966-7707 Prepared for: CH2MHILL Communications Group MAP ID: 02-0888/T119B-IN1-SC June 04, 2003
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# PRE-DEMOLITION SURVEY FOR T119B BUILDING

Survey Area: 5

Survey Unit: T119B-5-002

Classification: 3

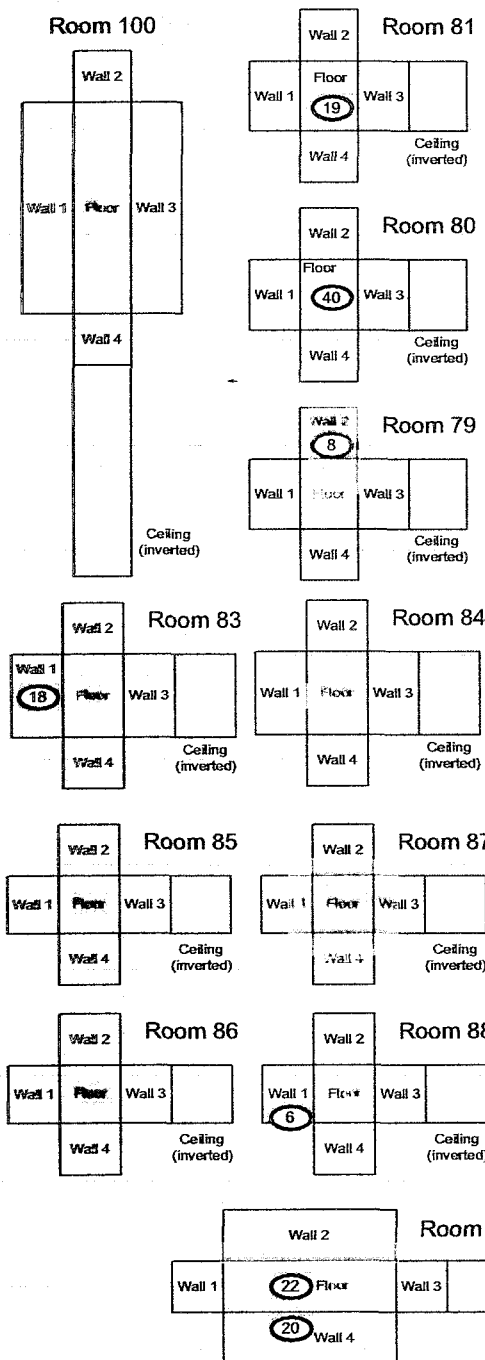
Building: T119B

Survey Unit Description: Trailer T119B (Interior)

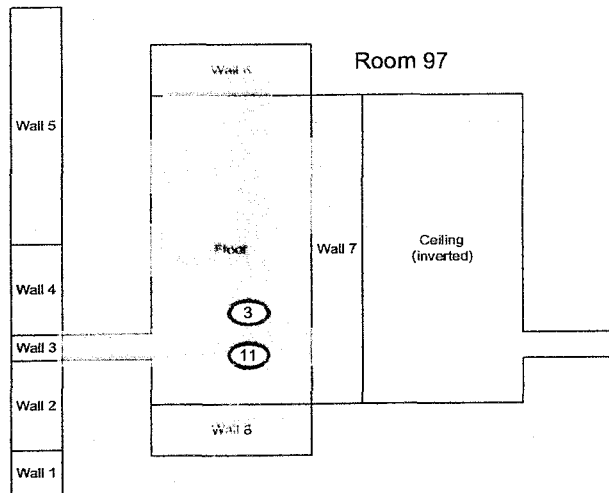
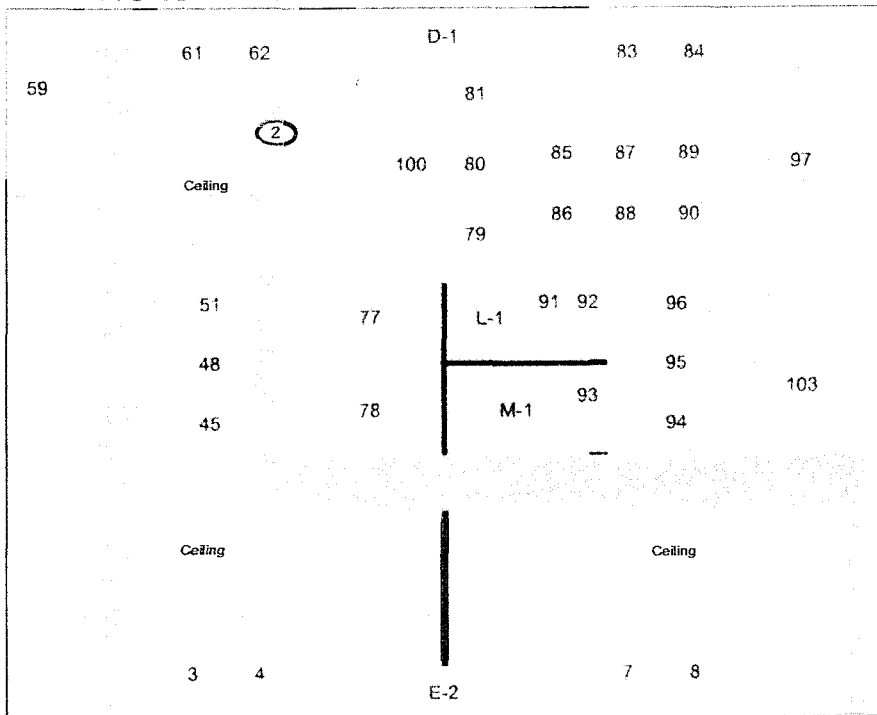
Total Area: 4762 sq. m.

Total Floor Area: 1362 sq. m.

PAGE 2 OF 3



## Trailer 119B Interior



### SURVEY MAP LEGEND

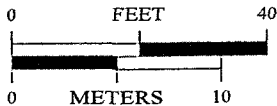
- Smear & TSA Location
- ◇ Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Location

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### Scan Survey Information

Survey Instrument ID #(s) & RCT ID #(s):  
1, 2, 3, 4, 5



1 inch = 30 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy  
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

Prepared for:

CH2M HILL  
Communications Group



MAP ID: 02-0888/T119B-IN2-SC

June 04, 2003

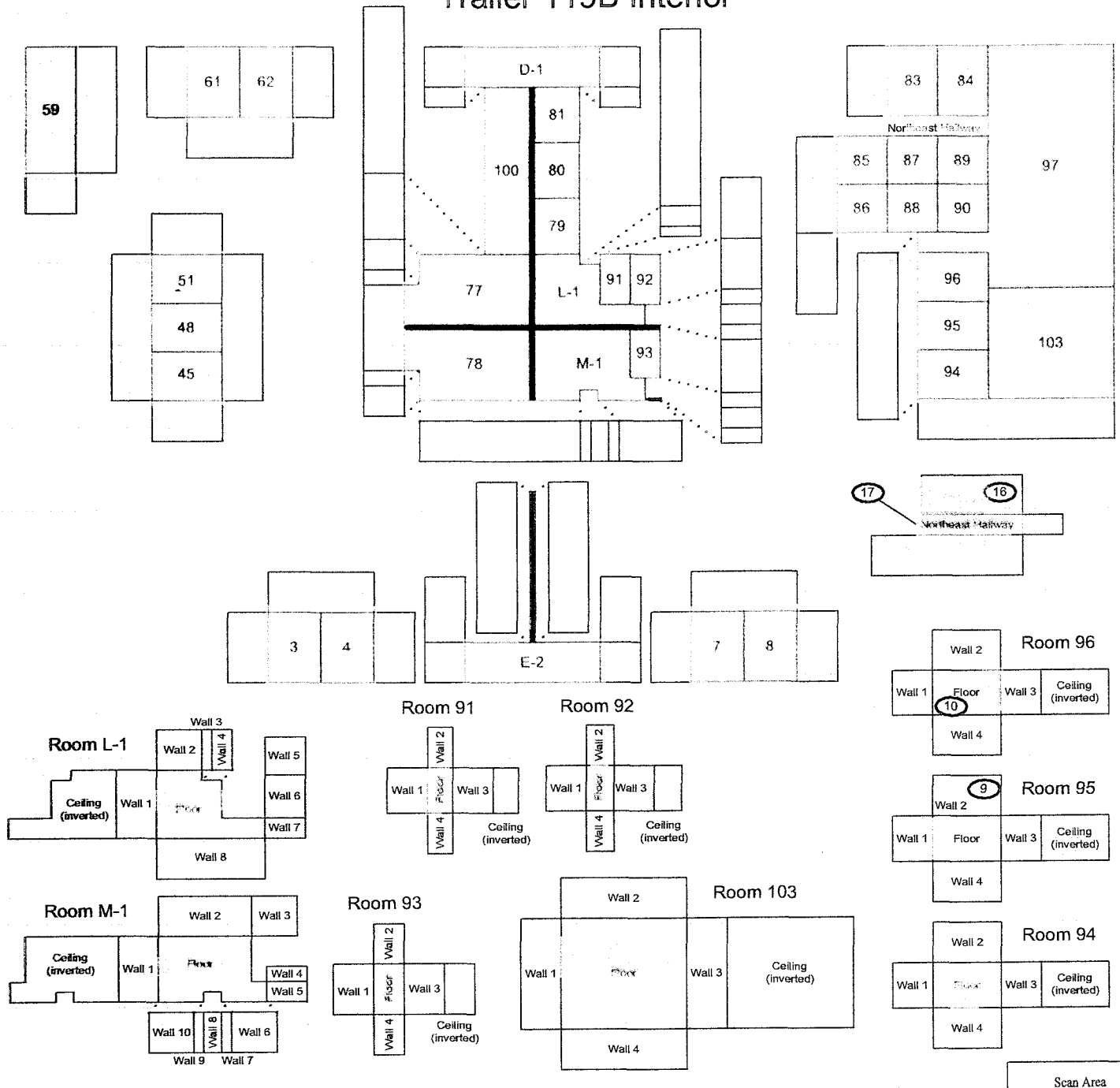


# PRE-DEMOLITION SURVEY FOR T119B BUILDING

Survey Area: 5 Survey Unit: T119B-5-002 Classification: 3  
 Building: T119B  
 Survey Unit Description: Trailer T119B (Interior)  
 Total Area: 4762 sq. m. Total Floor Area: 1362 sq. m.

PAGE 3 OF 3

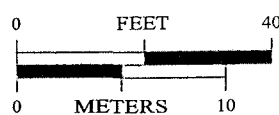
## Trailer 119B Interior



### SURVEY MAP LEGEND

- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Location

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Scan Survey Information  
 Survey Instrument ID #(s) & RCT ID #(s):  
 1, 2, 3, 4, 5

1 inch = 30 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy  
 Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

Prepared for:

CH2MHILL  
 Communications Group



MAP ID: 02-0888/T119B-IN2-SC

June 04, 2003



**SURVEY UNIT 121-5-003**  
**RADIOLOGICAL DATA SUMMARY - PDS**

Survey Unit Description: B121 (Interior)



121-5-003  
PDS Data Summary

Total Surface Activity Measurements

	35	35
	Number Required	Number Obtained
MIN	-9.8	dpm/100 cm <sup>2</sup>
MAX	22.8	dpm/100 cm <sup>2</sup>
MEAN	4.3	dpm/100 cm <sup>2</sup>
STD DEV	9.2	dpm/100 cm <sup>2</sup>
TRANSURANIC DCGL <sub>w</sub>	100	dpm/100 cm <sup>2</sup>

Removable Activity Measurements

	35	35
	Number Required	Number Obtained
MIN	-1.2	dpm/100 cm <sup>2</sup>
MAX	2.4	dpm/100 cm <sup>2</sup>
MEAN	0.1	dpm/100 cm <sup>2</sup>
STD DEV	0.9	dpm/100 cm <sup>2</sup>
TRANSURANIC DCGL <sub>w</sub>	20	dpm/100 cm <sup>2</sup>



**SURVEY UNIT 121-5-003  
TSA - DATA SUMMARY**

<b>Manufacturer:</b>	NE Tech	NE Tech	NE Tech	NE Tech	NE Tech	NE Tech
<b>Model:</b>	DP-6	DP-6	DP-6	DP-6	DP-6	DP-6
<b>Instrument ID#:</b>	1	2	3	4	5	10
<b>Serial #:</b>	1589	1420	1417	1681	1681	1136
<b>Cal Due Date:</b>	7/8/03	6/4/03	7/28/03	10/18/03	10/18/03	7/8/03
<b>Analysis Date:</b>	5/30/03	5/30/03	5/30/03	5/30/03	6/2/03	6/2/03
<b>Alpha Eff. (c/d):</b>	0.224	0.221	0.218	0.218	0.218	0.217
<b>Alpha Bkgd (cpm)</b>	3.3	0.7	1.3	3.3	3.3	2.7
<b>Sample Time (min)</b>	1.5	1.5	1.5	1.5	1.5	1.5
<b>LAB Time (min)</b>	1.5	1.5	1.5	1.5	1.5	1.5
<b>MDC (dpm/100cm<sup>2</sup>)</b>	48.0	48.0	48.0	48.0	48.0	48.0

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm <sup>2</sup> )	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm <sup>2</sup> )	Sample Net Activity (dpm/100cm <sup>2</sup> ) <sup>1</sup>
1	3	6.7	30.7	3.3	15.1	17.8
2	4	6.0	27.5	1.3	6.0	14.6
3	2	4.7	21.3	2.7	12.2	8.4
4	5	3.3	15.1	5.3	24.3	2.2
5	1	0.7	3.1	2.7	12.1	-9.8
6	3	0.7	3.2	1.3	6.0	-9.7
7	3	2.7	12.4	2.7	12.4	-0.5
8	2	3.3	14.9	5.3	24.0	2.0
9	3	1.3	6.0	2.0	9.2	-6.9
10	1	1.3	5.8	2.7	12.1	-7.1
11	2	6.7	30.3	4.0	18.1	17.4
12	1	2.0	8.9	6.0	26.8	-4.0
13	1	2.7	12.1	2.0	8.9	-0.8
14	3	3.3	15.1	2.0	9.2	2.2
15	3	3.3	15.1	5.3	24.3	2.2
16	4	3.3	15.1	4.7	21.6	2.2
17	4	6.0	27.5	2.0	9.2	14.6
18	1	2.0	8.9	0.7	3.1	-4.0
19	4	6.7	30.7	2.0	9.2	17.8
20	2	4.7	21.3	6.0	27.1	8.4
21	1	2.0	8.9	0.7	3.1	-4.0
22	4	4.0	18.3	2.7	12.4	5.4
23	2	5.3	24.0	2.7	12.2	11.1
24	4	4.7	21.6	1.3	6.0	8.7
25	1	8.0	35.7	3.3	14.7	22.8
26	1	5.3	23.7	3.3	14.7	10.8



**SURVEY UNIT 121-5-003  
TSA - DATA SUMMARY**

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm2)	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm2)	Sample Net Activity (dpm/100cm2) <sup>1</sup>
27	3	4.0	18.3	4.0	18.3	5.4
28	3	0.7	3.2	1.3	6.0	-9.7
29	2	6.0	27.1	3.3	14.9	14.3
30	3	0.7	3.2	2.0	9.2	-9.7
31	2	4.7	21.3	1.3	5.9	8.4
32	3	2.0	9.2	2.7	12.4	-3.7
33	2	6.0	27.1	2.4	10.9	14.3
34	3	4.7	21.6	2.0	9.2	8.7
35	2	2.7	12.2	2.4	10.9	-0.7

<sup>1</sup> - Average LAB used to subtract from Gross Sample Activity

12.9	Sample LAB Average
MIN	-9.8
MAX	22.8
MEAN	4.3
SD	9.2
Transuranic DCGL <sub>W</sub>	100

**QC Measurements**

2 QC	10	11.3	52.1	6.7	30.9	22.8
19 QC	10	5.3	24.4	6.0	27.6	-4.8

<sup>1</sup> - Average QC LAB used to subtract from Gross Sample Activity

29.3	QC LAB Average
MIN	-4.8
MAX	22.8
MEAN	9.0
Transuranic DCGL <sub>W</sub>	100

45



**SURVEY UNIT 121-5-003  
RSC - DATA SUMMARY**

Manufacturer:	Eberline	Eberline	Eberline	Eberline
Model:	SAC-4	SAC-4	SAC-4	SAC-4
Instrument ID#:	6	7	8	9
Serial #:	959	952	971	924
Cal Due Date:	7/9/03	7/9/03	8/6/03	10/23/03
Analysis Date:	6/2/03	6/2/03	6/2/03	6/2/03
Alpha Eff. (c/d):	0.33	0.33	0.33	0.33
Alpha Bkgd (cpm)	0.0	0.4	0.2	0.0
Sample Time (min)	2	2	2	2
Bkgd Time (min)	10	10	10	10
MDC (dpm/100cm <sup>2</sup> )	9.0	9.0	9.0	9.0

Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm <sup>2</sup> )
1	6	1	1.5
2	7	1	0.3
3	8	1	0.9
4	9	1	0.9
5	6	0	0.0
6	7	0	-1.2
7	8	1	0.9
8	9	0	-0.6
9	6	0	0.0
10	7	1	0.3
11	8	0	-0.6
12	9	2	2.4
13	6	0	0.0
14	7	0	-1.2
15	8	0	-0.6
16	9	0	-0.6
17	6	0	0.0
18	7	1	0.3
19	8	1	0.9
20	9	0	-0.6
21	6	1	1.5
22	7	0	-1.2
23	8	0	-0.6
24	9	0	-0.6
25	6	1	1.5
26	7	1	0.3
27	8	0	-0.6
28	9	1	0.9
29	6	0	0.0
30	7	2	1.8
31	8	0	-0.6
32	9	0	-0.6
33	6	0	0.0
34	7	0	-1.2
35	8	0	-0.6
		MIN	-1.2
		MAX	2.4
		MEAN	0.1
		SD	0.9
		Transuranic DCGL <sub>av</sub>	20

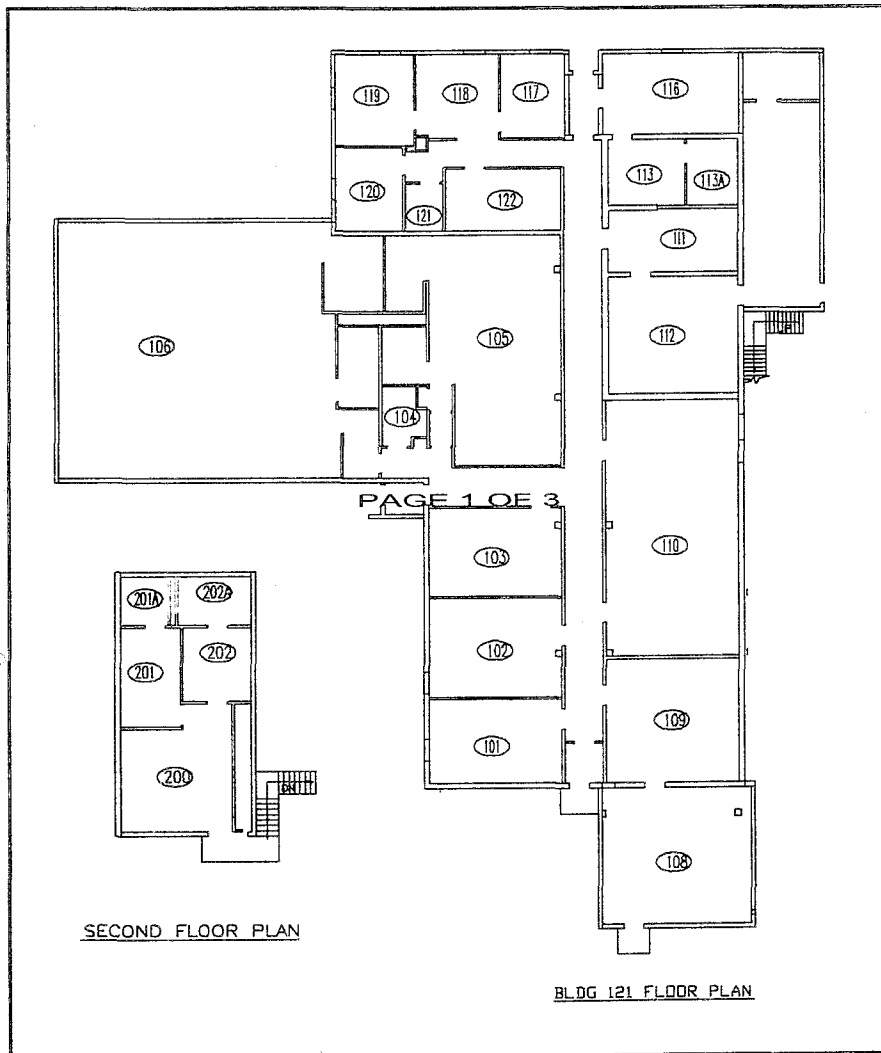


# PRE-DEMOLITION SURVEY FOR 121 BUILDING

Survey Area: 5      Survey Unit: 121-5-003      Classification: 3  
 Building: 121  
 Survey Unit Description: Building 121 (Interior)  
 Total Area: N/A      Total Floor Area: N/A

PAGE 1 OF 1

## Building 121 Floor Plan



## For Reference Only

<b>SURVEY MAP LEGEND</b> <ul style="list-style-type: none"> <li>Smear &amp; TSA Location</li> <li>Smear, TSA &amp; Sample Location</li> <li>Open/Inaccessible Area</li> <li>Area in Another Location</li> </ul>	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&amp;ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.</p> <p><b>Scan Survey Information</b>                  Survey Instrument ID #(s) RCT ID #(s):                  N/A</p>	<p>N</p> <p>↑</p>	<p>0      FEET      0</p> <p>0      METERS      0</p>	<p>U.S. Department of Energy                  Rocky Flats Environmental Technology Site</p> <p>Prepared by: GIS Dept. 303-966-7707      Prepared for:</p> <p>CH2MHILL                  Communications Group</p> <p>MAP ID: 02-0888\121-FP-SC      June 05, 2003</p>
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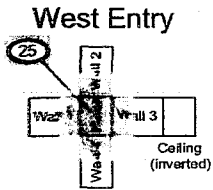
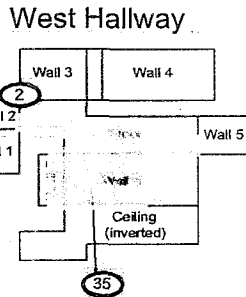
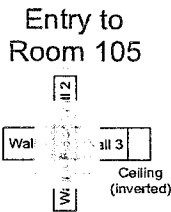
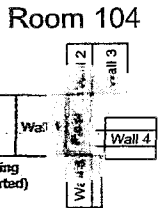
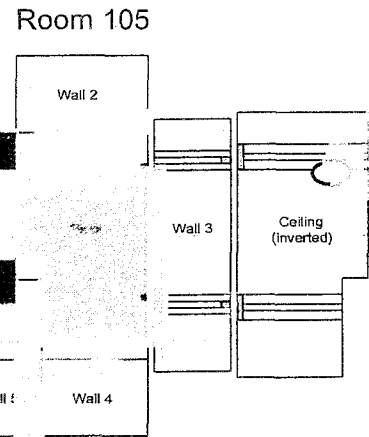
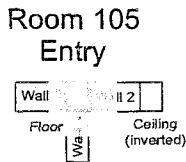
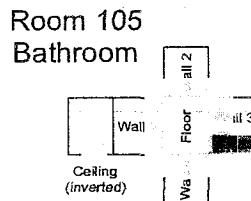
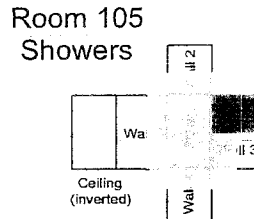
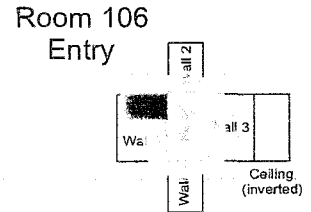
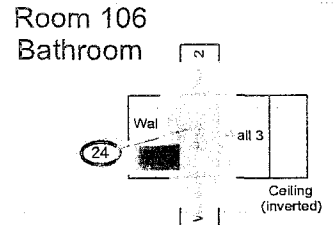
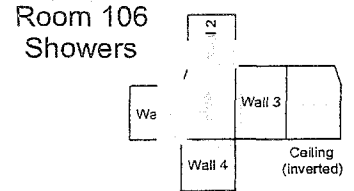
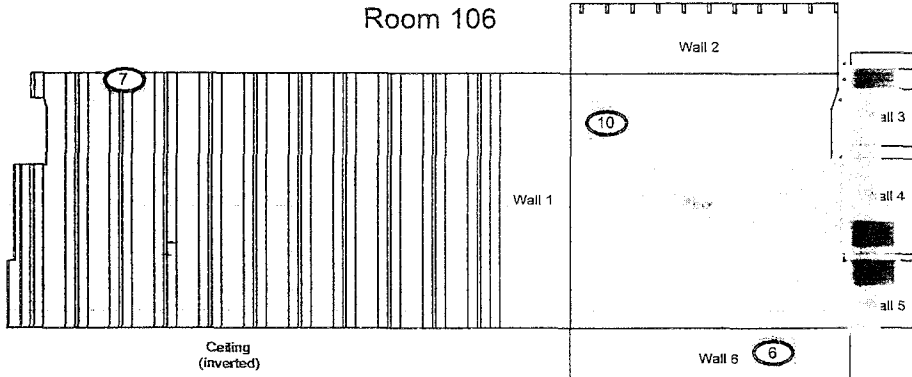


# PRE-DEMOLITION SURVEY FOR BUILDING 121

Survey Area: 5      Survey Unit: 121-5-003      Classification: 3  
 Building: 121  
 Survey Unit Description: Building 121 (Interior)  
 Total Area: 4026 sq. m.      Total Floor Area: 878 sq. m.

PAGE 1 OF 3

## Building 121 Interior



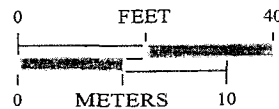
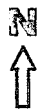
### SURVEY MAP LEGEND

- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

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### Scan Survey Information

Survey Instrument ID #(s) & RCT ID #(s):  
 1, 2, 3, 4, 5



1 inch = 30 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy  
 Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

Prepared for:

CH2MHILL  
 Communications Group



MAP ID: 02-0888/B121-IN1-SC

June 05, 2003

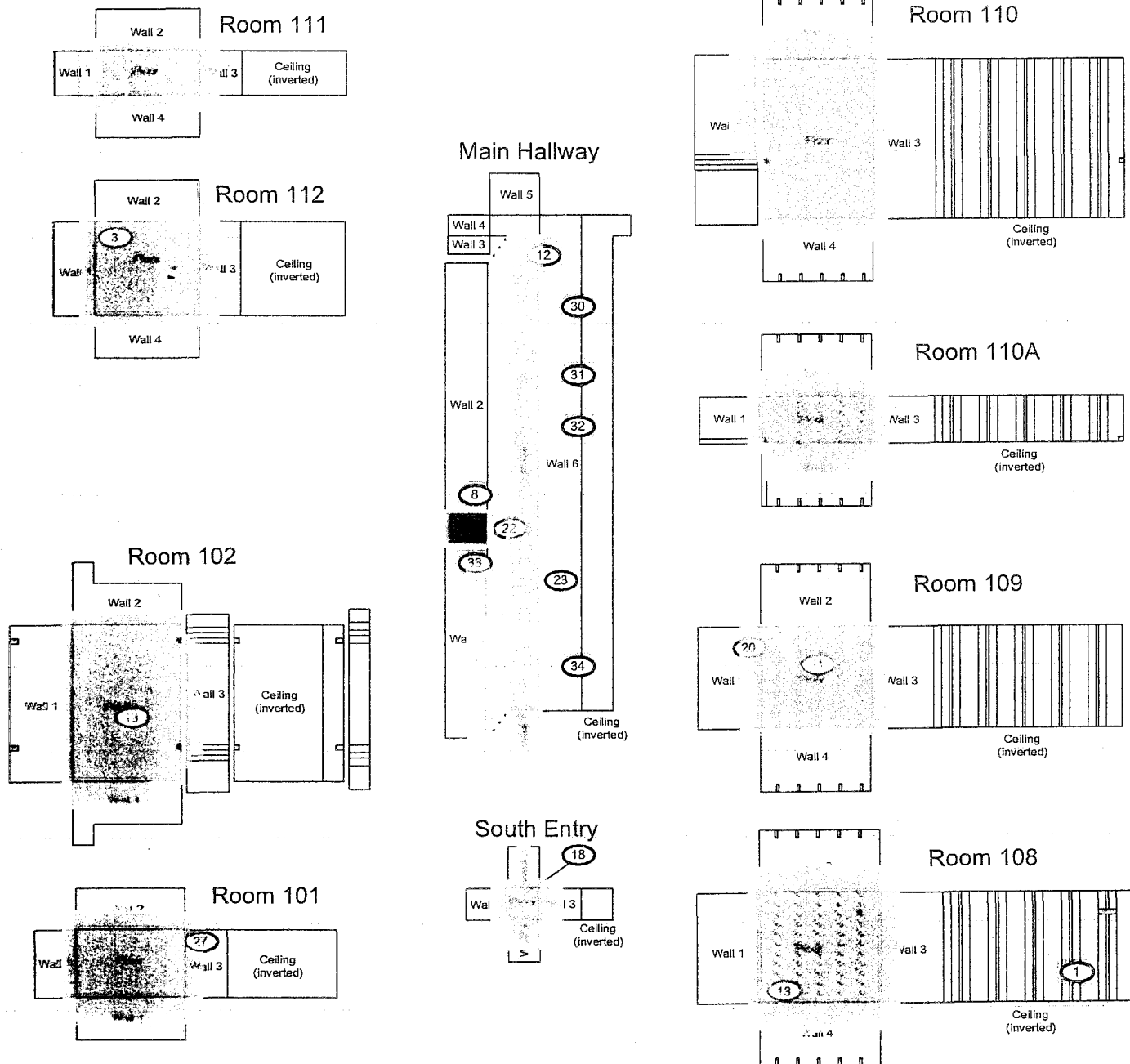


# PRE-DEMOLITION SURVEY FOR BUILDING 121

Survey Area: 5      Survey Unit: 121-5-003      Classification: 3  
 Building: 121  
 Survey Unit Description: Building 121 (Interior)  
 Total Area: 4026 sq. m.      Total Floor Area: 878 sq. m.

PAGE 2 OF 3

## Building 121 Interior



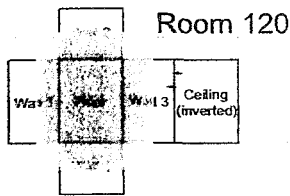
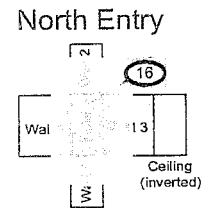
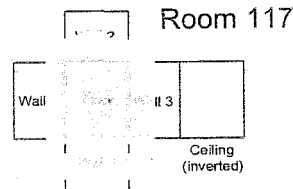
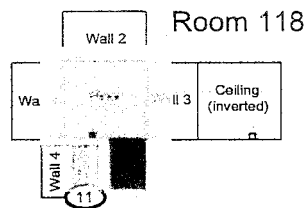
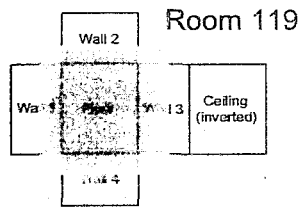
<b>SURVEY MAP LEGEND</b> (S) Smear & TSA Location (S) Smear, TSA & Sample Location ■ Open/Inaccessible Area □ Area in Another Survey Unit	Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.  <b>Scan Survey Information</b> Survey Instrument ID #(s) & RCT ID #(s): 1, 2, 3, 4, 5	0 40 FEET 0 10 METERS 1 inch = 30 feet 1 grid sq. = 1 sq. m.	U.S. Department of Energy Rocky Flats Environmental Technology Site Prepared by: GIS Dept. 303-966-7707 CH2M HILL Communications Group MAP ID: 02-0888/B121-IN2-SC June 05, 2003
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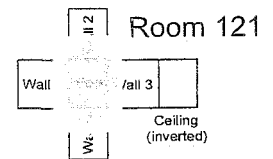
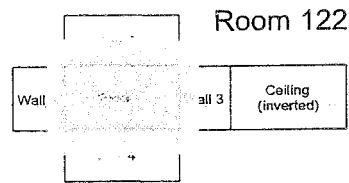
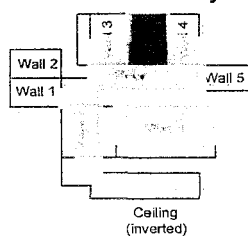
# PRE-DEMOLITION SURVEY FOR BUILDING 121

Survey Area: 5      Survey Unit: 121-5-003      Classification: 3  
 Building: 121  
 Survey Unit Description: Building 121 (Interior)  
 Total Area: 4026 sq. m.      Total Floor Area: 878 sq. m.

PAGE 3 OF 3

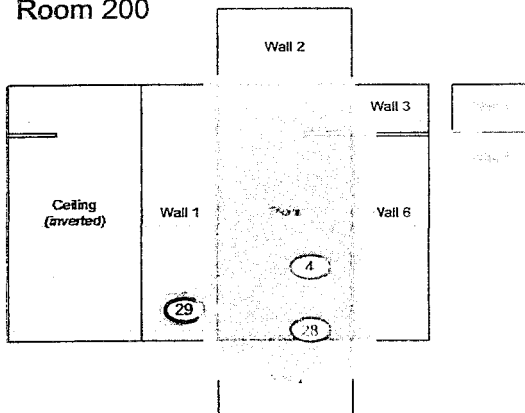


## North Hallway

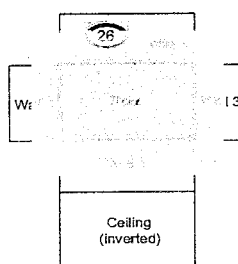


## Building 121 Interior

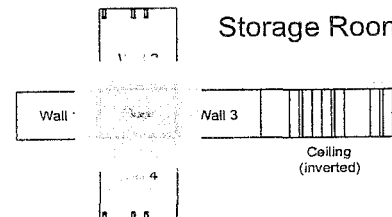
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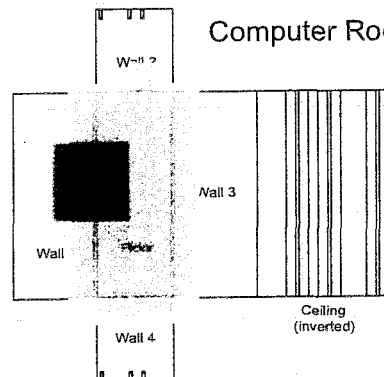
## Room 116



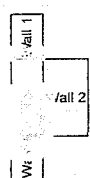
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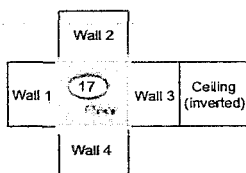
## Computer Room



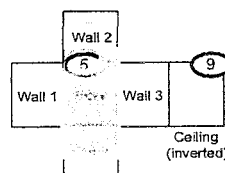
## Computer Box



## Room 113



## Room 113A



Scan Area

### SURVEY MAP LEGEND

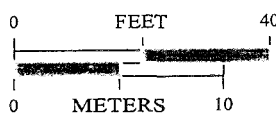
- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

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### Scan Survey Information

Survey Instrument ID #(s) & RCT ID #(s):  
 1, 2, 3, 4, 5



1 inch = 30 feet    1 grid sq. = 1 sq. m.

U.S. Department of Energy  
 Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

Prepared for:

CH2MHILL  
 Communications Group



MAP ID: 02-0888/B121-IN3-SC

June 05, 2003



**SURVEY UNIT 122S-5-005**  
**RADIOLOGICAL DATA SUMMARY - PDS**

Survey Unit Description: 122S (Interior)



122S-5-005  
PDS Data Summary

Total Surface Activity Measurements

	25	25
	Number Required	Number Obtained
MIN	-9.8	dpm/100 cm <sup>2</sup>
MAX	22.8	dpm/100 cm <sup>2</sup>
MEAN	2.7	dpm/100 cm <sup>2</sup>
STD DEV	9.8	dpm/100 cm <sup>2</sup>
TRANSURANIC DCGL <sub>w</sub>	100	dpm/100 cm <sup>2</sup>

Removable Activity Measurements

	25	25
	Number Required	Number Obtained
MIN	-1.5	dpm/100 cm <sup>2</sup>
MAX	1.5	dpm/100 cm <sup>2</sup>
MEAN	-0.2	dpm/100 cm <sup>2</sup>
STD DEV	1.0	dpm/100 cm <sup>2</sup>
TRANSURANIC DCGL <sub>w</sub>	20	dpm/100 cm <sup>2</sup>



**SURVEY UNIT 122S-5-005  
TSA - DATA SUMMARY**

Manufacturer:	NE Tech	NE Tech	NE Tech
Model:	DP-6	DP-6	DP-6
Instrument ID#:	1	2	3
Serial #:	1366	1420	1420
Cal Due Date:	6/26/03	6/4/03	6/4/03
Analysis Date:	5/21/03	5/21/03	5/21/03
Alpha Eff. (c/d):	0.209	0.221	0.221
Alpha Bkgd (cpm)	2.7	1.3	1.3
Sample Time (min)	1.5	1.5	1.5
LAB Time (min)	1.5	1.5	1.5
MDC (dpm/100cm <sup>2</sup> )	48.0	48.0	48.0

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm <sup>2</sup> )	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm <sup>2</sup> )	Sample Net Activity (dpm/100cm <sup>2</sup> ) <sup>1,2</sup>
1	2	2.7	12.2	4.0	18.1	-6.7
2	2	4.7	21.3	2.0	9.0	2.4
3	1	6.7	32.1	8.0	38.3	13.2
4	1	5.3	25.4	7.3	34.9	6.5
5	1	8.7	41.6	2.7	12.9	22.8
6	1	8.0	38.3	4.7	22.5	19.4
7	1	3.3	15.8	5.3	25.4	-3.1
8	2	6.0	27.1	2.0	9.0	8.3
9	1	6.7	32.1	6.7	32.1	13.2
10	1	2.7	12.9	0.0	0.0	-5.9
11	2	4.7	21.3	0.7	3.2	2.4
12	1	8.0	38.3	6.0	28.7	19.4
13	1	2.0	9.6	5.3	25.4	-9.3
14	1	4.0	19.1	7.3	34.9	0.3
15	1	4.7	22.5	8.0	38.3	3.6
16	2	3.3	14.9	1.3	5.9	-3.9
17	2	2.0	9.0	1.3	5.9	-9.8
18	2	2.0	9.0	5.3	24.0	-9.8
19	2	4.0	18.1	2.7	12.2	-0.8
20	2	6.7	30.3	3.3	14.9	11.4
21	3	4.0	18.1	1.3	5.9	-0.8
22	3	2.7	12.2	2.0	9.0	-6.7
23	3	4.7	21.3	3.3	14.9	2.4
24	1	6.0	28.7	4.0	19.1	9.8
25	3	2.0	9.0	6.0	27.1	-9.8

1 - Average LAB used to subtract from Gross Sample Activity

18.9	Sample LAB Average
MIN	-9.8
MAX	22.8
MEAN	2.7
SD	9.8
Transuranic DCGL <sub>W</sub>	100

**QC Measurements**

5 QC	3	2.7	12.2	4.7	21.3	-11.1
11 QC	1	4.7	22.5	5.3	25.4	-0.8

1 - Average QC LAB used to subtract from Gross Sample Activity

23.3	QC LAB Average
MIN	-11.1
MAX	-0.8
MEAN	-6.0
Transuranic DCGL <sub>W</sub>	100



**SURVEY UNIT 122S-5-005  
RSC - DATA SUMMARY**

<b>Manufacturer:</b>	Eberline	Eberline	Eberline	Eberline
<b>Model:</b>	SAC-4	SAC-4	SAC-4	SAC-4
<b>Instrument ID#:</b>	4	5	6	7
<b>Serial #:</b>	959	952	971	924
<b>Cal Due Date:</b>	7/9/03	7/9/03	8/6/03	10/23/03
<b>Analysis Date:</b>	5/22/03	5/22/03	5/22/03	5/22/03
<b>Alpha Eff. (c/d):</b>	0.33	0.33	0.33	0.33
<b>Alpha Bkgd (cpm)</b>	0.3	0.5	0.2	0.3
<b>Sample Time (min)</b>	2	2	2	2
<b>Bkgd Time (min)</b>	10	10	10	10
<b>MDC (dpm/100cm<sup>2</sup>)</b>	9.0	9.0	9.0	9.0

Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm <sup>2</sup> )
1 -	4	0	0.0
2	5	0	0.0
3	6	1	0.6
4	7	1	0.0
5	4	0	0.0
6	5	1	1.5
7	6	0	-0.9
8	7	0	-1.5
9	4	0	0.0
10	5	1	1.5
11	6	0	-0.9
12	7	0	-1.5
13	4	0	0.0
14	5	0	0.0
15	6	0	-0.9
16	7	0	-1.5
17	4	0	0.0
18	5	1	1.5
19	6	0	-0.9
20	7	0	-1.5
21	4	0	0.0
22	5	1	1.5
23	6	0	-0.9
24	7	0	-1.5
25	4	0	0.0
		MIN	-1.5
		MAX	1.5
		MEAN	-0.2
		SD	1.0
		Transuranic DCGL <sub>w</sub>	20

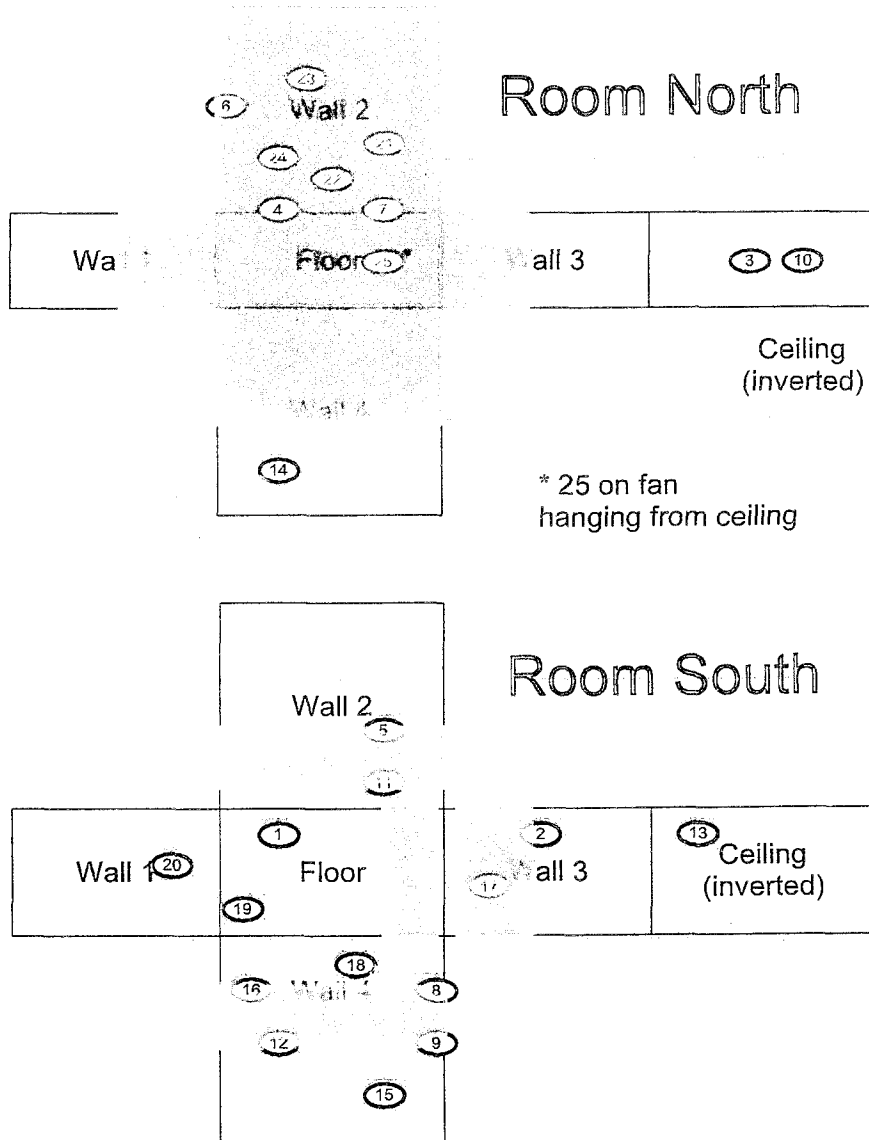


# PRE-DEMOLITION SURVEY FOR B122S

Survey Area: 5 Survey Unit: 122S-5-005 Classification: 3  
 Building: B122S  
 Survey Unit Description: Building 122S (Interior)  
 Total Area: 138 sq. m. Total Floor Area: 18 sq. m.

PAGE 1 OF 1

## B122S Interior



<b>SURVEY MAP LEGEND</b> (a) Smear & TSA Location (b) Smear, TSA & Sample Location ■ Open/Inaccessible Area □ Area in Another Survey Unit		Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.		0 FEET 15 0 METERS 5 1 inch = 12 feet 1 grid sq. = 1 sq. m.		U.S. Department of Energy Rocky Flats Environmental Technology Site Prepared by: GIS Dept. 303-966-7707 CH2MHILL Communications Group MAP ID: 02-0888/B122S-IN-SC		Scan Area Prepared for: Kaiser Hill June 04, 2003	
<b>Scan Survey Information</b> Survey Instrument ID #(s) & RCT ID #(s): 2									



**SURVEY UNIT T124A-5-006**  
**RADIOLOGICAL DATA SUMMARY - PDS**

Survey Unit Description: T124A (Interior)



T124A-5-006  
PDS Data Summary

<u>Total Surface Activity Measurements</u>			<u>Removable Activity Measurements</u>		
	41	41		41	
	Number Required	Number Obtained		Number Required	Number Obtained
MIN	-8.5	dpm/100 cm <sup>2</sup>	MIN	-1.8	dpm/100 cm <sup>2</sup>
MAX	21.8	dpm/100 cm <sup>2</sup>	MAX	4.2	dpm/100 cm <sup>2</sup>
MEAN	6.5	dpm/100 cm <sup>2</sup>	MEAN	0.0	dpm/100 cm <sup>2</sup>
STD DEV	8.6	dpm/100 cm <sup>2</sup>	STD DEV	1.3	dpm/100 cm <sup>2</sup>
TRANSURANIC DCGL <sub>w</sub>	100	dpm/100 cm <sup>2</sup>	TRANSURANIC DCGL <sub>w</sub>	20	dpm/100 cm <sup>2</sup>



**SURVEY UNIT T124A-5-006  
TSA - DATA SUMMARY**

Manufacturer:	NE Tech	NE Tech	NE Tech	NE Tech	NE Tech
Model:	DP-6	DP-6	DP-6	DP-6	DP-6
Instrument ID#:	1	2	3	4	9
Serial #:	1681	1417	1417	1271	1681
Cal Due Date:	10/18/03	7/28/03	7/28/03	6/24/03	10/18/03
Analysis Date:	5/21/03	5/21/03	5/22/03	5/22/03	6/10/03
Alpha Eff. (c/d):	0.218	0.218	0.218	0.228	0.218
Alpha Bkgd (cpm)	2.7	2.0	2.0	1.3	2.0
Sample Time (min)	1.5	1.5	1.5	1.5	1.5
LAB Time (min)	1.5	1.5	1.5	1.5	1.5
MDC (dpm/100cm <sup>2</sup> )	48.0	48.0	48.0	48.0	48.0

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm2)	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm2)	Sample Net Activity (dpm/100cm2) <sup>1</sup>
1	2	2.7	12.4	2.7	12.4	0.7
2	2	3.3	15.1	1.3	6.0	3.4
3	2	6.0	27.5	1.3	6.0	15.8
4	2	2.7	12.4	3.3	15.1	0.7
5	2	4.7	21.6	1.3	6.0	9.9
6	2	4.0	18.3	2.7	12.4	6.7
7	2	2.7	12.4	0.7	3.2	0.7
8	2	3.3	15.1	0.0	0.0	3.4
9	2	0.7	3.2	2.7	12.4	-8.5
10	2	6.7	30.7	0.7	3.2	19.0
11	2	2.7	12.4	4.7	21.6	0.7
12	2	0.7	3.2	2.1	9.6	-8.5
13	2	4.7	21.6	2.7	12.4	9.9
14	1	2.7	12.4	4.0	18.3	0.7
15	1	2.0	9.2	5.3	24.3	-2.5
16	2	2.0	9.2	4.0	18.3	-2.5
17	2	2.7	12.4	4.0	18.3	0.7
18	2	4.7	21.6	2.0	9.2	9.9
19	2	4.0	18.3	1.3	6.0	6.7
20	2	7.3	33.5	4.7	21.6	21.8
21	1	3.3	15.1	2.0	9.2	3.4
22	1	6.7	30.7	0.7	3.2	19.0
23	1	6.0	27.5	3.3	15.1	15.8
24	1	2.7	12.4	2.7	12.4	0.7
25	1	2.7	12.4	2.7	12.4	0.7
26	1	2.0	9.2	1.3	6.0	-2.5
27	2	4.7	21.6	0.7	3.2	9.9
28	1	3.3	15.1	1.3	6.0	3.4
29	2	4.0	18.3	2.7	12.4	6.7
30	1	3.3	15.1	2.7	12.4	3.4
31	1	0.7	3.2	2.0	9.2	-8.5
32	3	6.7	30.7	2.0	9.2	19.0



**SURVEY UNIT T124A-5-006**  
**TSA - DATA SUMMARY**

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm2)	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm2)	Sample Net Activity (dpm/100cm2) <sup>1</sup>
33	3	6.7	30.7	2.0	9.2	19.0
34	4	7.3	32.0	4.7	20.6	20.3
35	4	4.7	20.6	4.7	20.6	8.9
36	4	6.0	26.3	1.3	5.7	14.6
37	4	7.3	32.0	4.0	17.5	20.3
38	4	6.7	29.4	3.3	14.5	17.7
39	4	2.7	11.8	2.0	8.8	0.2
40	3	2.7	12.4	2.7	12.4	0.7
41	4	4.0	17.5	5.3	23.2	5.9

<sup>1</sup> - Average LAB used to subtract from Gross Sample Activity

11.7	Sample LAB Average
MIN	-8.5
MAX	21.8
MEAN	6.5
SD	8.6
Transuranic DCGL <sub>w</sub>	100

**QC Measurements**

20 QC	9	3.3	15.1	8.0	36.7	-2.1
27 QC	3	4.7	21.6	2.0	9.2	4.3
10 QC	3	3.3	15.1	1.3	6.0	-2.1

<sup>1</sup> - Average QC LAB used to subtract from Gross Sample Activity

17.3	QC LAB Average
MIN	-2.1
MAX	4.3
MEAN	0.0
Transuranic DCGL <sub>w</sub>	100



**SURVEY UNIT T124A-5-006**

**RSC - DATA SUMMARY**

<b>Manufacturer:</b>	Eberline	Eberline	Eberline	Eberline
<b>Model:</b>	SAC-4	SAC-4	SAC-4	SAC-4
<b>Instrument ID#:</b>	5	6	7	8
<b>Serial #:</b>	959	952	971	924
<b>Cal Due Date:</b>	7/9/03	7/9/03	8/6/03	10/23/03
<b>Analysis Date:</b>	5/27/03	5/27/03	5/27/03	5/27/03
<b>Alpha Eff. (c/d):</b>	0.33	0.33	0.33	0.33
<b>Alpha Bkgd (cpm)</b>	0.1	0.6	0.3	0.3
<b>Sample Time (min)</b>	2	2	2	2
<b>Bkgd Time (min)</b>	10	10	10	10
<b>MDC (dpm/100cm<sup>2</sup>)</b>	9.0	9.0	9.0	9.0

Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm <sup>2</sup> )
1	5	1	1.2
2	6	1	-0.3
3	7	0	-0.9
4	8	2	2.1
5	5	0	-0.3
6	6	1	-0.3
7	7	0	-0.9
8	8	2	2.1
9	5	3	4.2
10	6	1	-0.3
11	7	0	-0.9
12	8	0	-0.9
13	5	0	-0.3
14	6	1	-0.3
15	7	0	-0.9
16	8	1	0.6
17	5	0	-0.3
18	6	1	-0.3
19	7	0	-0.9
20	8	0	-0.9
21	5	0	-0.3
22	6	1	-0.3
23	7	0	-0.9
24	8	1	0.6
25	5	1	1.2
26	6	0	-1.8
27	7	2	2.1
28	8	0	-0.9
29	5	1	1.2
30	6	0	-1.8
31	7	0	-0.9
32	8	2	2.1
33	5	1	1.2
34	6	1	-0.3
35	7	1	0.6
36	8	0	-0.9
37	5	0	-0.3
38	6	0	-1.8
39	7	1	0.6
40	8	0	-0.9
41	5	0	-0.3
		MIN	-1.8
		MAX	4.2
		MEAN	0.0
		SD	1.3
		Transuranic DCGL <sub>W</sub>	20



# PRE-DEMOLITION SURVEY FOR T124A

Survey Area: 5

Survey Unit: T124A-5-006

Classification: 3

Building: T124A

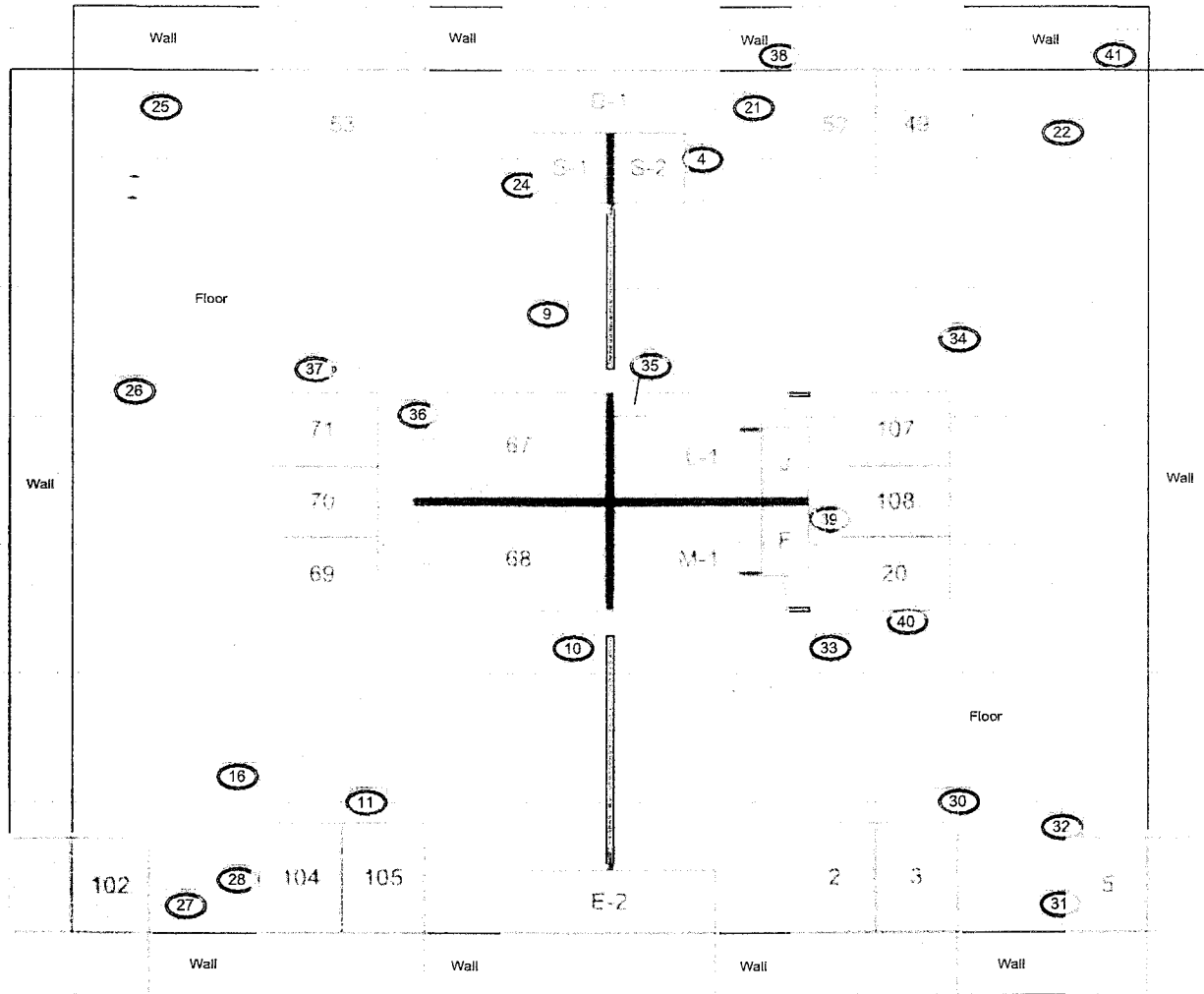
Survey Unit Description: T124A Interior

Total Area: 4,566 sq. m.

Total Floor Area: 1400 sq. m.

PAGE 1 OF 5

## T124A Interior

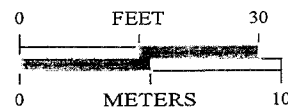


Scan Area

### SURVEY MAP LEGEND

- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Location

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1 inch = 24 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy  
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

Prepared for:

**CH2MHILL**  
Communications Group



MAP ID: 02-0888\T124A-IN1-SC

June 02, 2003

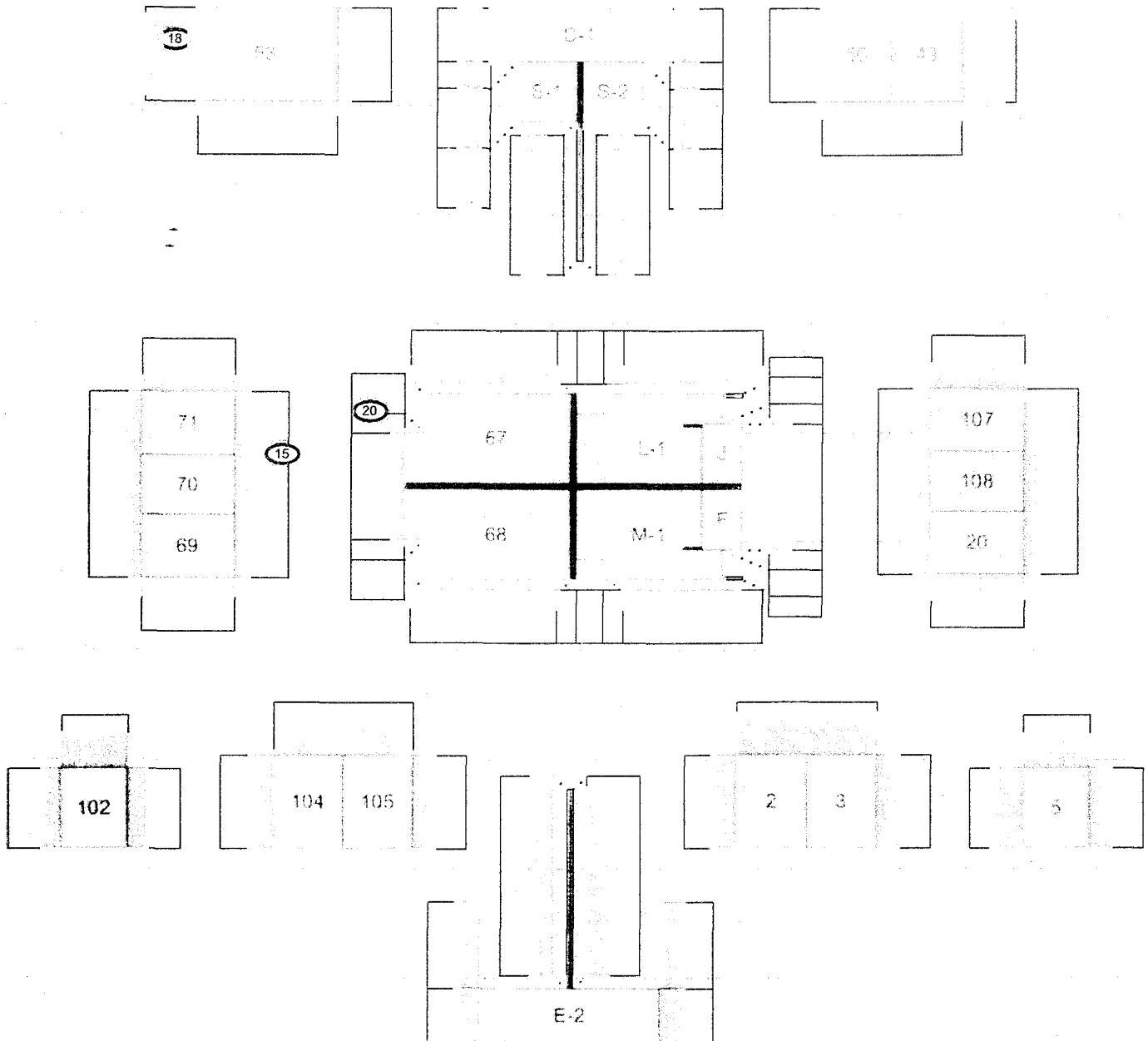


# PRE-DEMOLITION SURVEY FOR T124A

Survey Area: 5      Survey Unit: T124A-5-006      Classification: 3  
 Building: T124A  
 Survey Unit Description: T124A Interior  
 Total Area: 4,566 sq. m.      Total Floor Area: 1400 sq. m.

PAGE 2 OF 5

## T124A Interior (Exterior walls of interior rooms)



<b>SURVEY MAP LEGEND</b> (S) Smear & TSA Location (S) Smear, TSA & Sample Location [ ] Open/Inaccessible Area [ ] Area in Another Location		Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.		N ↑		0      FEET      30 0      METERS      10		U.S. Department of Energy Rocky Flats Environmental Technology Site Prepared by: GIS Dept. 303-966-7707      Prepared for:	
<b>Scan Survey Information</b> Survey Instrument ID #(s) & RCT ID #(s): 1, 2, 3, 4		1 inch = 24 feet    1 grid sq. = 1 sq. m.		<b>CH2MHILL</b> Communications Group		MAP ID: 02-0888\T124A-IN2-SC      June 02, 2003		Scan Area	

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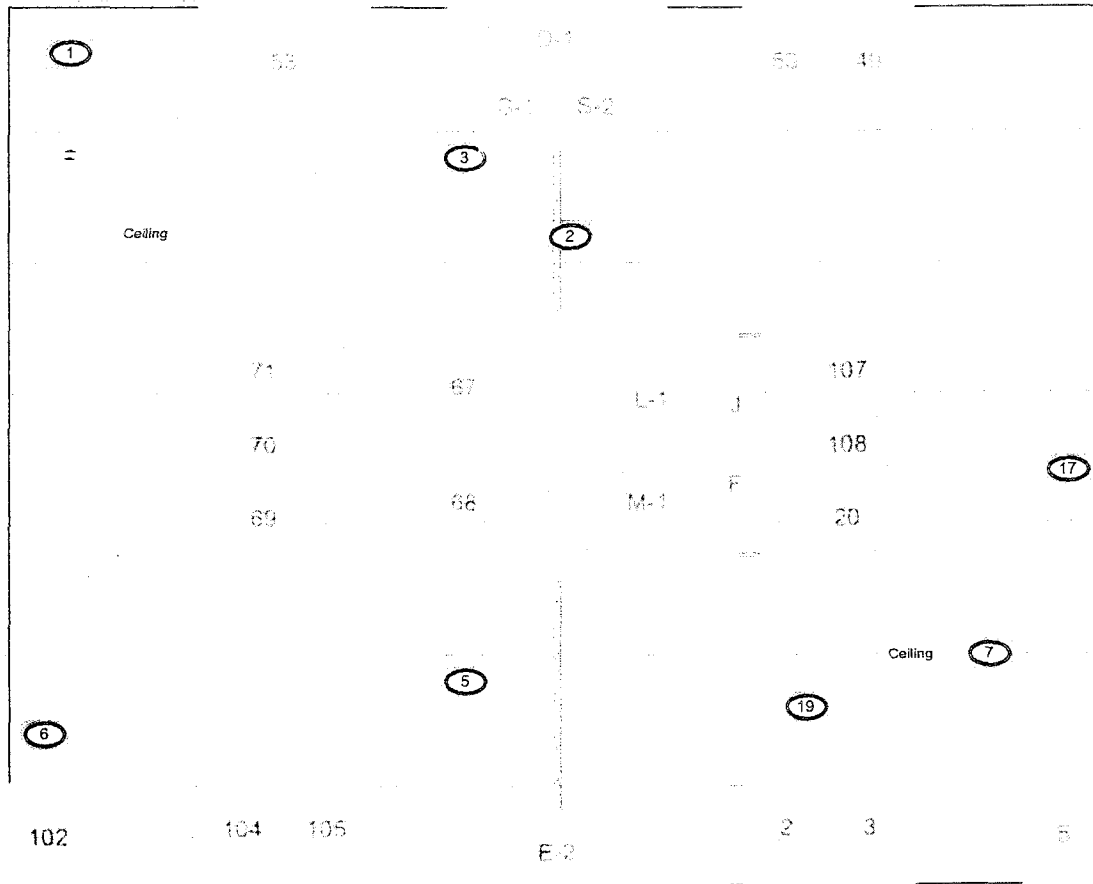


# **PRE-DEMOLITION SURVEY FOR T124A**

Survey Area: 5      Survey Unit: T124A-5-006      Classification: 3  
 Building: T124A  
 Survey Unit Description: T124A Interior  
 Total Area: 4,566 sq. m.      Total Floor Area: 1400 sq. m.

PAGE 3 OF 5

## **T124A Interior (Ceiling)**



Scan Area

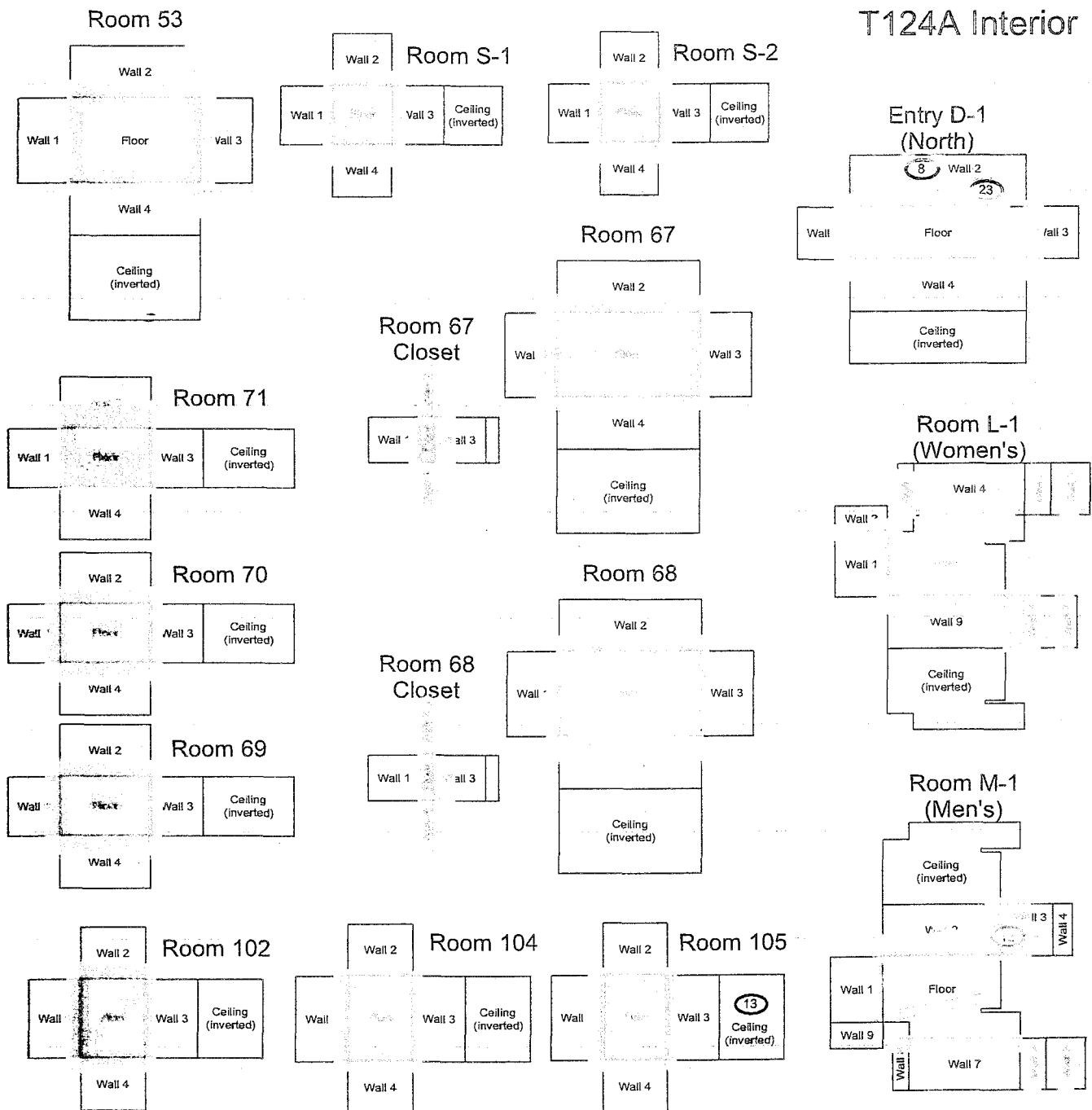
<p><b>SURVEY MAP LEGEND</b></p> <ul style="list-style-type: none"> <li> Smear &amp; TSA Location</li> <li> Smear, TSA &amp; Sample Location</li> <li> Open/Inaccessible Area</li> <li> Area in Another Survey Unit</li> </ul>	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&amp;ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.</p> <p><b>Scan Survey Information</b>                  Survey Instrument ID #(s) &amp; RCT ID #(s):                  1, 2, 3, 4</p>	<p></p> <p><b>FEET</b>                  0 30</p> <p><b>METERS</b>                  0 10</p> <p>1 inch = 24 feet    1 grid sq. = 1 sq. m.</p>	<p>U.S. Department of Energy                  Rocky Flats Environmental Technology Site</p> <p>Prepared by: GIS Dept. 303-966-7707    Prepared for:</p> <p>                  Communications Group</p> <p>MAP ID: 02-0888\T124A-IN3-SC    June 02, 2003</p>
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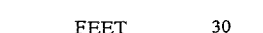








# PRE-DEMOLITION SURVEY FOR T124A

Survey Area: 5      Survey Unit: T124A-5-006      Classification: 3  
 Building: T124A  
 Survey Unit Description: T124A Interior  
 Total Area: 4,566 sq. m.      Total Floor Area: 1400 sq. m.

PAGE 4 OF 5



<b><u>SURVEY MAP LEGEND</u></b>		<div style="text-align: center;"> <b>N</b></div>	<div style="text-align: center;"> <b>0                      30</b> <b>FEET</b>  <b>0                      10</b> <b>METERS</b></div>	<b>U.S. Department of Energy</b> <b>Rocky Flats Environmental Technology Site</b>	
	Smear & TSA Location			Prepared by: GIS Dept. 303-966-7707	Prepared for:
	Smear, TSA & Sample Location			<div style="text-align: center;"> <b>CH2MHILL</b> Communications Group</div>	
	Open/Inaccessible Area				
	Area in Another Survey Unit	MAP ID: 02-0888T124A-IN4-SC			
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# PRE-DEMOLITION SURVEY FOR T124A

Survey Area: 5

Survey Unit: T124A-5-006

Classification: 3

Building: T124A

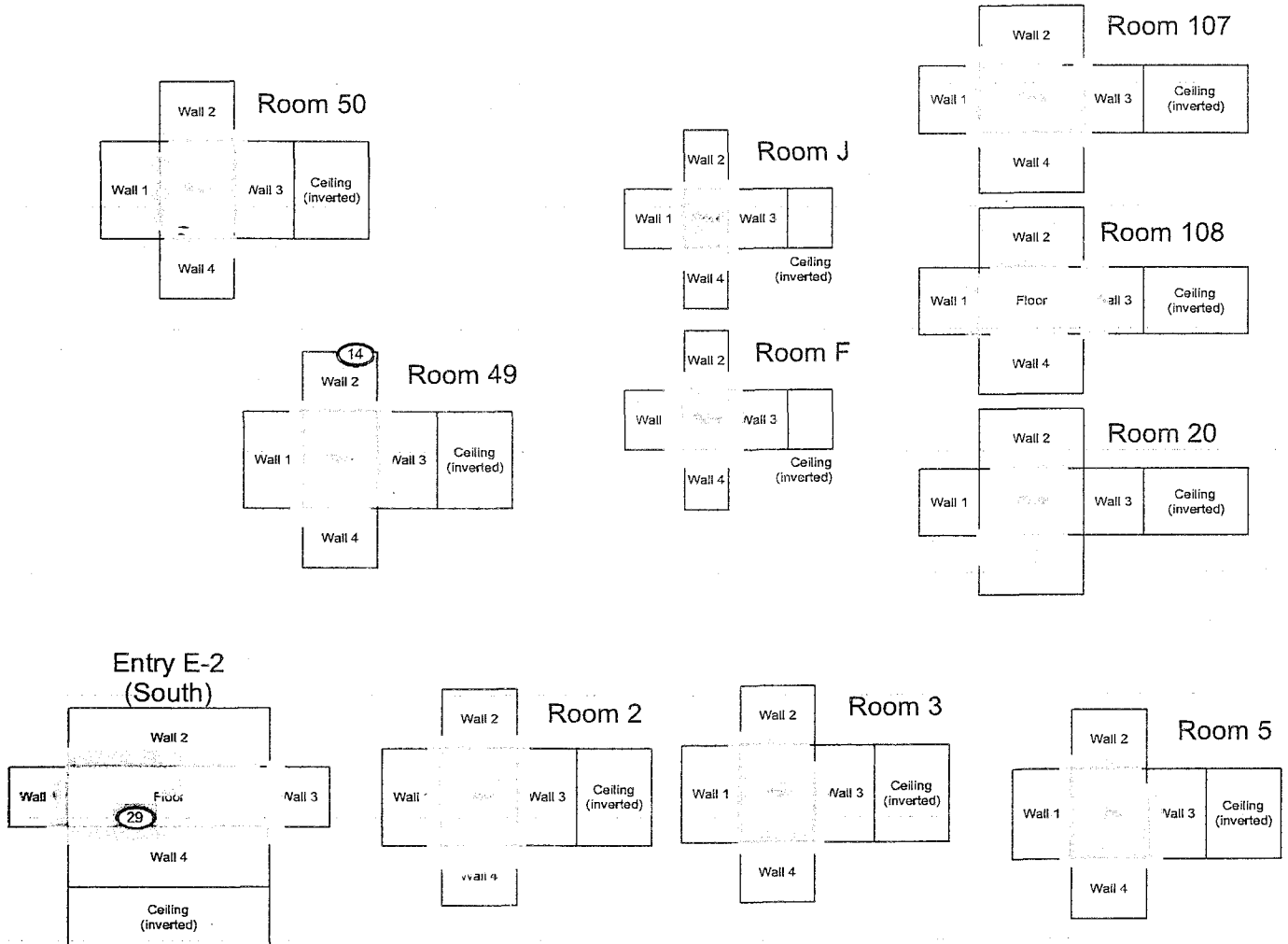
Survey Unit Description: T124A Interior

Total Area: 4,566 sq. m.

Total Floor Area: 1400 sq. m.

PAGE 5 OF 5

## T124A Interior



SURVEY MAP LEGEND		Scan Survey Information		U.S. Department of Energy Rocky Flats Environmental Technology Site	
	Smear & TSA Location	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&amp;ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.</p> <p>Survey Instrument ID #(s) &amp; RCT ID #(s): 1, 2, 3, 4</p>		<p>Prepared by: GIS Dept. 303-966-7707</p> <p>Prepared for:</p>	
	Smear, TSA & Sample Location			<p>CH2MHILL Communications Group</p> <p>MAP ID: 02-0888T124A-IN5-SC</p>	
	Open/Inaccessible Area	<p>1 inch = 24 feet 1 grid sq. = 1 sq. m.</p>		<p>June 02, 2003</p>	
	Area in Another Survey Unit				

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**SURVEY UNIT 127-5-007**  
**RADIOLOGICAL DATA SUMMARY - PDS**

**Survey Unit Description: B127 (Interior)**



127-5-007  
PDS Data Summary

Total Surface Activity Measurements

	25	25
	Number Required	Number Obtained
MIN	-13.7	dpm/100 cm <sup>2</sup>
MAX	43.7	dpm/100 cm <sup>2</sup>
MEAN	17.6	dpm/100 cm <sup>2</sup>
STD DEV	15.4	dpm/100 cm <sup>2</sup>
TRANSURANIC DCGL <sub>w</sub>	100	dpm/100 cm <sup>2</sup>

Removable Activity Measurements

	25	25
	Number Required	Number Obtained
MIN	-0.6	dpm/100 cm <sup>2</sup>
MAX	1.2	dpm/100 cm <sup>2</sup>
MEAN	0.1	dpm/100 cm <sup>2</sup>
STD DEV	0.8	dpm/100 cm <sup>2</sup>
TRANSURANIC DCGL <sub>w</sub>	20	dpm/100 cm <sup>2</sup>



**SURVEY UNIT 127-5-007  
TSA - DATA SUMMARY**

Manufacturer:	NE Tech	NE Tech
Model:	DP-6	DP-6
Instrument ID#:	1	2
Serial #:	1366	1420
Cal Due Date:	6/26/03	6/4/03
Analysis Date:	5/21/03	5/21/03
Alpha Eff. (c/d):	0.209	0.221
Alpha Bkgd (cpm)	2.7	1.3
Sample Time (min)	1.5	1.5
LAB Time (min)	1.5	1.5
MDC (dpm/100cm <sup>2</sup> )	48.0	48.0

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm <sup>2</sup> )	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm <sup>2</sup> )	Sample Net Activity (dpm/100cm <sup>2</sup> ) <sup>1,2</sup>
1	1	11.3	54.1	5.3	25.4	40.3
2	1	0.0	0.0	1.3	6.2	-13.7
3	1	9.3	44.5	5.3	25.4	30.8
4	1	8.7	41.6	5.3	25.4	27.9
5	1	2.7	12.9	3.3	15.8	-0.8
6	1	6.7	32.1	4.0	19.1	18.3
7	2	4.7	21.3	0.7	3.2	7.5
8	2	5.3	24.0	2.7	12.2	10.2
9	2	9.3	42.1	1.3	5.9	28.3
10	2	6.7	30.3	2.0	9.0	16.6
11	1	6.7	32.1	6.0	28.7	18.3
12	2	7.3	33.0	0.7	3.2	19.3
13	2	4.7	21.3	4.0	18.1	7.5
14	1	2.7	12.9	4.7	22.5	-0.8
15	2	11.3	51.1	2.0	9.0	37.4
16	2	10.0	45.2	2.0	9.0	31.5
17	1	12.0	57.4	6.7	32.1	43.7
18	1	10.0	47.8	4.0	19.1	34.1
19	2	11.3	51.1	2.0	9.0	37.4
20	2	6.7	30.3	2.0	9.0	16.6
21	2	6.7	30.3	0.7	3.2	16.6
22	2	4.7	21.3	0.7	3.2	7.5
23	2	4.7	21.3	1.3	5.9	7.5
24	2	2.7	12.2	3.3	14.9	-1.5
25	2	2.7	12.2	2.0	9.0	-1.5

1 - Average LAB used to subtract from Gross Sample Activity

13.7	Sample LAB Average
MIN	-13.7
MAX	43.7
MEAN	17.6
SD	15.4
Transuranic DCGL <sub>av</sub>	100

**QC Measurements**

15 QC	1	6.0	28.7	2.7	12.9	11.0
21 QC	1	4.0	19.1	4.7	22.5	1.4

1 - Average QC LAB used to subtract from Gross Sample Activity

17.7	QC LAB Average
MIN	1.4
MAX	11.0
MEAN	6.2
Transuranic DCGL <sub>av</sub>	100

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**SURVEY UNIT 127-5-007  
RSC - DATA SUMMARY**

<b>Manufacturer:</b>	Eberline	Eberline	Eberline	Eberline
<b>Model:</b>	SAC-4	SAC-4	SAC-4	SAC-4
<b>Instrument ID#:</b>	3	4	5	6
<b>Serial #:</b>	959	952	971	924
<b>Cal Due Date:</b>	7/9/03	7/9/03	8/6/03	10/23/03
<b>Analysis Date:</b>	5/21/03	5/19/03	5/19/03	5/19/03
<b>Alpha Eff. (c/d):</b>	0.33	0.33	0.33	0.33
<b>Alpha Bkgd (cpm)</b>	0.2	0.2	0.1	0.4
<b>Sample Time (min)</b>	2	2	2	2
<b>Bkgd Time (min)</b>	10	10	10	10
<b>MDC (dpm/100cm<sup>2</sup>)</b>	9.0	9.0	9.0	9.0

Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm <sup>2</sup> )
1	3	1	0.9
2	4	1	0.9
3	5	0	-0.3
4	6	0	-0.3
5	3	0	-0.6
6	4	0	-0.6
7	5	0	-0.3
8	6	1	1.2
9	3	0	-0.6
10	4	0	-0.6
11	5	1	1.2
12	6	1	1.2
13	3	0	-0.6
14	4	0	-0.6
15	5	0	-0.3
16	6	0	-0.3
17	3	0	-0.6
18	4	1	0.9
19	5	0	-0.3
20	6	1	1.2
21	3	1	0.9
22	4	1	0.9
23	5	0	-0.3
24	6	0	-0.3
25	3	0	-0.6
		MIN	-0.6
		MAX	1.2
		MEAN	0.1
		SD	0.8
		Transuranic DCGL <sub>w</sub>	20



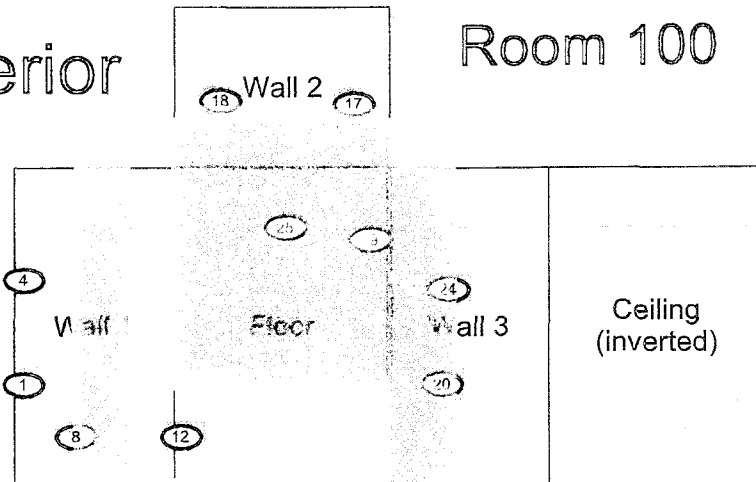
# PRE-DEMOLITION SURVEY FOR B127

Survey Area: 5      Survey Unit: 127-5-007      Classification: 3  
 Building: B127  
 Survey Unit Description: Building 127 (Interior)  
 Total Area: 201 sq. m.      Total Floor Area: 43 sq. m.

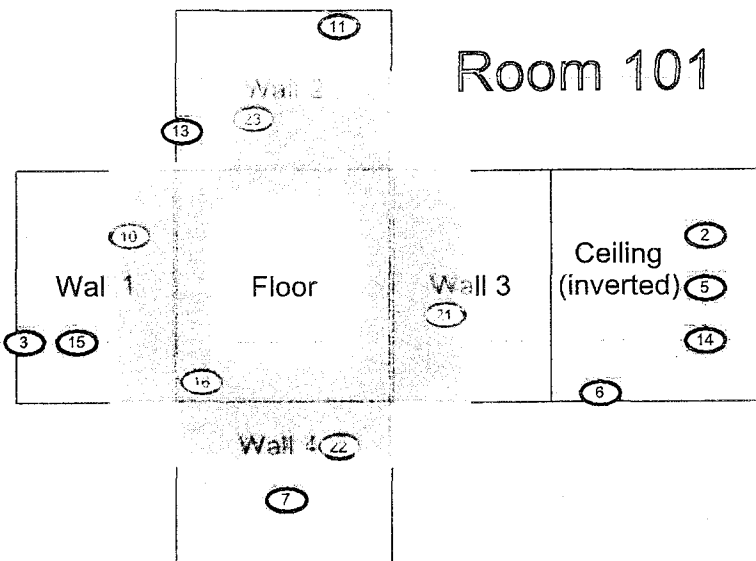
PAGE 1 OF 1

B127 Interior

Room 100



Room 101



## SURVEY MAP LEGEND

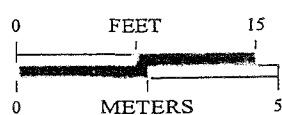
- Smear & TSA Location
- Smear, TSA & Sample Location
- Open/Inaccessible Area
- Area in Another Survey Unit

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## Scan Survey Information

Survey Instrument ID #(s) & RCT ID #(s):  
 1, 2



1 inch = 12 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy  
 Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

Prepared for:

CH2MHILL  
 Communications Group



MAP ID: 02-0888/B127-IN-SC

June 09, 2003



**SURVEY UNIT 128-5-008**  
**RADIOLOGICAL DATA SUMMARY - PDS**

**Survey Unit Description: B128 (Interior)**



128-5-008  
PDS Data Summary

Total Surface Activity Measurements			Removable Activity Measurements		
	25	25		25	
	Number Required	Number Obtained		Number Required	Number Obtained
MIN	-6.5	dpm/100 cm <sup>2</sup>	MIN	-1.2	dpm/100 cm <sup>2</sup>
MAX	48.8	dpm/100 cm <sup>2</sup>	MAX	4.8	dpm/100 cm <sup>2</sup>
MEAN	19.1	dpm/100 cm <sup>2</sup>	MEAN	0.6	dpm/100 cm <sup>2</sup>
STD DEV	15.6	dpm/100 cm <sup>2</sup>	STD DEV	1.5	dpm/100 cm <sup>2</sup>
TRANSURANIC DCGL <sub>w</sub>	100	dpm/100 cm <sup>2</sup>	TRANSURANIC DCGL <sub>w</sub>	20	dpm/100 cm <sup>2</sup>



**SURVEY UNIT 128-5-008  
TSA - DATA SUMMARY**

Manufacturer:	NE Tech	NE Tech	NE Tech
Model:	DP-6	DP-6	DP-6
Instrument ID#:	1	2	3
Serial #:	1260	3115	1136
Cal Due Date:	7/10/03	9/24/03	7/8/03
Analysis Date:	6/2/03	6/2/03	6/2/03
Alpha Eff. (c/d):	0.223	0.218	0.217
Alpha Bkgd (cpm)	0.7	2.0	2.7
Sample Time (min)	1.5	1.5	1.5
LAB Time (min)	1.5	1.5	1.5
MDC (dpm/100cm <sup>2</sup> )	48.0	48.0	48.0

Sample Location Number	Instrument ID#:	Sample Gross Counts (cpm)	Sample Gross Activity (dpm/100cm <sup>2</sup> )	LAB Gross Counts (cpm)	LAB Gross Activity (dpm/100cm <sup>2</sup> )	Sample Net Activity (dpm/100cm <sup>2</sup> ) <sup>1</sup>
1	3	12.0	55.3	7.3	33.6	42.9
2	1	2.7	12.1	2.0	9.0	-0.3
3	1	6.0	26.9	0.7	3.1	14.5
4	3	10.0	46.1	2.7	12.4	33.6
5	1	6.7	30.0	0.7	3.1	17.6
6	3	9.3	42.9	5.3	24.4	30.4
7	3	12.0	55.3	4.0	18.4	42.9
8	3	8.0	36.9	3.3	15.2	24.4
9	1	4.0	17.9	0.7	3.1	5.5
10	1	8.0	35.9	0.7	3.1	23.4
11	1	3.3	14.8	1.3	5.8	2.4
12	1	2.7	12.1	3.3	14.8	-0.3
13	3	10.0	46.1	4.7	21.7	33.6
14	2	8.7	39.9	2.0	9.2	27.5
15	1	4.7	21.1	2.7	12.1	8.6
16	3	7.3	33.6	4.7	21.7	21.2
17	2	6.7	30.7	2.0	9.2	18.3
18	2	6.7	30.7	1.3	6.0	18.3
19	2	4.0	18.3	1.3	6.0	5.9
20	2	3.3	15.1	3.3	15.1	2.7
21	2	7.3	33.5	1.3	6.0	21.0
22	2	3.3	15.1	1.3	6.0	2.7
23	2	1.3	6.0	1.3	6.0	-6.5
24	3	11.3	52.1	4.7	21.7	39.6
25	3	13.3	61.3	5.3	24.4	48.8

<sup>1</sup> - Average LAB used to subtract from Gross Sample Activity

12.4	Sample LAB Average
MIN	-6.5
MAX	48.8
MEAN	19.1
SD	15.6
Transuranic DCGL <sub>w</sub>	100

**QC Measurements**

1 QC	2	6.0	27.5	3.3	15.1	15.4
4 QC	2	4.7	21.6	2.0	9.2	9.4

<sup>1</sup> - Average QC LAB used to subtract from Gross Sample Activity

12.2	QC LAB Average
MIN	9.4
MAX	15.4
MEAN	12.4
Transuranic DCGL <sub>w</sub>	100

73.



**SURVEY UNIT 128-5-008  
RSC - DATA SUMMARY**

<b>Manufacturer:</b>	Eberline	Eberline	Eberline	Eberline
<b>Model:</b>	SAC-4	SAC-4	SAC-4	SAC-4
<b>Instrument ID#:</b>	5	6	7	8
<b>Serial #:</b>	959	952	971	924
<b>Cal Due Date:</b>	7/9/03	7/9/03	8/6/03	10/23/03
<b>Analysis Date:</b>	6/2/03	6/2/03	6/2/03	6/2/03
<b>Alpha Eff. (c/d):</b>	0.33	0.33	0.33	0.33
<b>Alpha Bkgd (cpm)</b>	0.0	0.4	0.2	0.0
<b>Sample Time (min)</b>	2	2	2	2
<b>Bkgd Time (min)</b>	10	10	10	10
<b>MDC (dpm/100cm<sup>2</sup>)</b>	9.0	9.0	9.0	9.0

Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm <sup>2</sup> )
1	5	1	1.5
2	6	3	3.3
3	7	1	0.9
4	8	0	-0.6
5	5	1	1.5
6	6	0	-1.2
7	7	0	-0.6
8	8	1	0.9
9	5	1	1.5
10	6	0	-1.2
11	7	0	-0.6
12	8	0	-0.6
13	5	1	1.5
14	6	3	3.3
15	7	0	-0.6
16	8	0	-0.6
17	5	0	0.0
18	6	4	4.8
19	7	1	0.9
20	8	0	-0.6
21	5	0	0.0
22	6	1	0.3
23	7	1	0.9
24	8	0	-0.6
25	5	0	0.0
		MIN	-1.2
		MAX	4.8
		MEAN	0.6
		SD	1.5
		Transuranic DCGL <sub>w</sub>	20

74

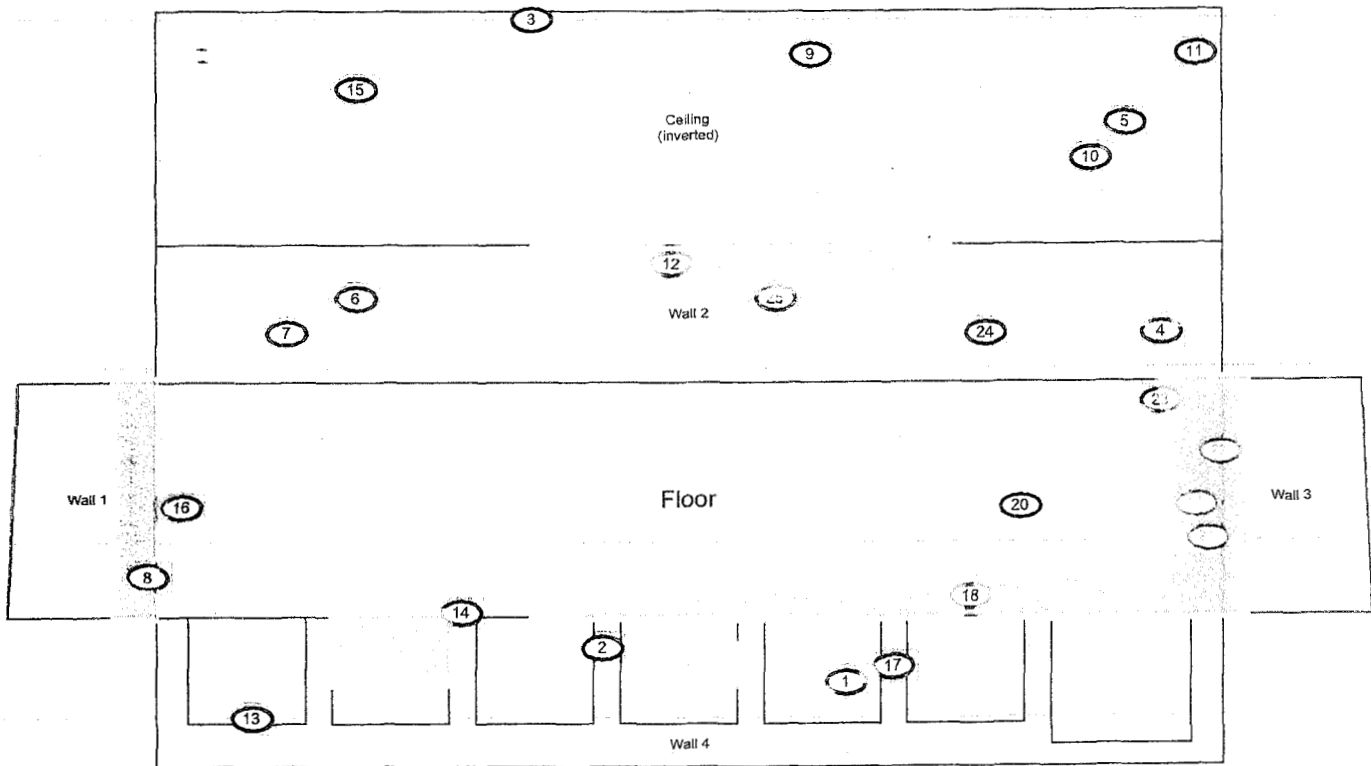


**PRE-DEMOLITION SURVEY FOR B128**

Survey Area: 5      Survey Unit: 128-5-008      Classification: 3  
Building: B128  
Survey Unit Description: Building 128 (Interior)  
Total Area: 715 sq. m.      Total Floor Area: 204 sq. m.

PAGE 1 OF 1

**B128 Interior**



<b>SURVEY MAP LEGEND</b>				U.S. Department of Energy Rocky Flats Environmental Technology Site	
Smear & TSA Location	Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.			Prepared by: GIS Dept. 303-966-7707	Prepared for:
Smear, TSA & Sample Location	<b>Scan Survey Information</b> Survey Instrument ID #(s) & RCT ID #(s): 1, 2, 3, 4				
Open/Inaccessible Area					
Area in Another Location	1 inch = 18 feet    1 grid sq. = 1 sq. m.	MAP ID: 02-0888/B128-IN-SC	June 09, 2003		

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## ATTACHMENT D

### Chemical Data Summaries and Sample Maps



## Asbestos Data Summary

Sample Number	Map Survey Point Location	Room	Sample Location	Analytical Results
<b>Building T124A</b>				
T124A-04162003-315-201	1	Main	2' x 4' white acoustical drop ceiling tile	None Detected
T124A-04162003-315-202	2	Main	2' x 4' white acoustical drop ceiling tile	None Detected
T124A-04162003-315-203	3	Main	2' x 4' white acoustical drop ceiling tile	None Detected
T124A-04162003-315-204	4	F	White and tan sheet vinyl linoleum	None Detected
T124A-04162003-315-205	5	E-2	White and tan sheet vinyl linoleum	None Detected
<b>Building 119</b>				
119-04162003-315-201	1	113	2' x 4' white acoustical drop ceiling tile with large "worm"	None Detected
119-04162003-315-202	2	113	Drywall with white troweled-on texture	None Detected
119-04162003-315-203	3	113	Joint compound with white troweled-on texture	None Detected
119-04162003-315-204	4	101	2' x 4' white acoustical drop ceiling tile with large "worm"	None Detected
119-04162003-315-205	5	101	2' x 4' white acoustical drop ceiling tile with large "worm"	None Detected
119-04162003-315-206	6	122	12" beige vinyl floor tile and black mastic	None Detected
119-04162003-315-207	7	122	Drywall with orange peel texture	None Detected
119-04162003-315-208	8	123	Beige and tan sheet vinyl linoleum with paper backing	None Detected
119-04162003-315-209	9	113A	Drywall with white troweled-on texture	None Detected
<b>Building 121</b>				
121-04162003-315-201	1	Main Hallway	White plaster and paint on CMU	None Detected
121-04162003-315-202	2	Main Hallway	White plaster and paint on CMU	None Detected
121-04162003-315-203	3	Main Hallway	White plaster and paint on CMU	None Detected
121-04162003-315-204	4	Main Hallway	12" brown vinyl floor tile and black adhesive in south entry	None Detected
121-04162003-315-205	5	Main Hallway	White plaster and paint on CMU in north entry	None Detected
121-04162003-315-206	6	Main Hallway	12" white vinyl floor tile and yellow adhesive in north entry	None Detected
121-04162003-315-207	7	110	White plaster and paint on CMU in north entry	3 % Chrysotile; 1.5 % Point Count
121-04162003-315-208	8	110	12" brown vinyl floor tile and black adhesive	None Detected
121-04162003-315-209	9	Main Hallway	2' x 2' white acoustical drop ceiling tile	None Detected
121-04162003-315-210	10	Main Hallway	2' x 2' white acoustical drop ceiling tile	None Detected
121-04162003-315-211	11	Main Hallway	2' x 2' white acoustical drop ceiling tile	None Detected



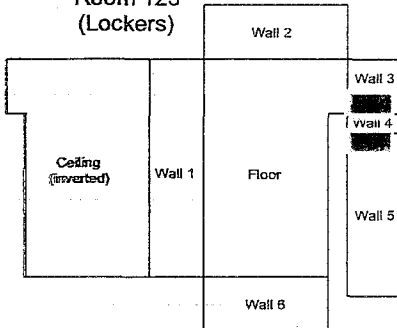
# CHEMICAL SAMPLE MAP

Building 119  
Asbestos

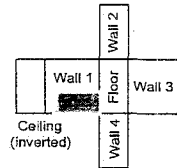
PAGE 1 OF 2

## Men's Locker Area (123)

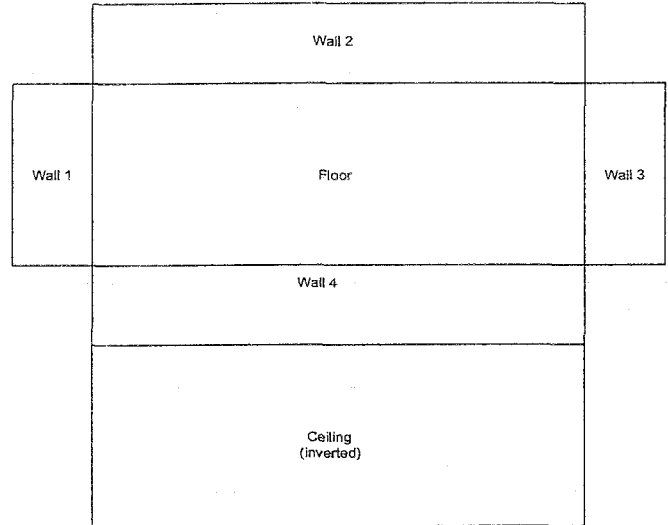
Room 123  
(Lockers)



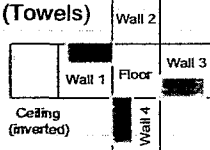
Room 123  
(North Entry)



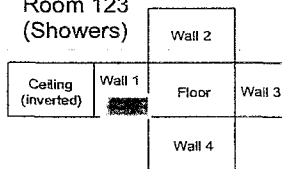
Room 130



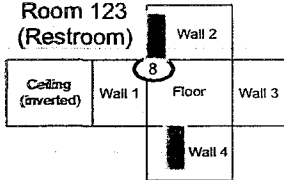
Room 123  
(Towels)



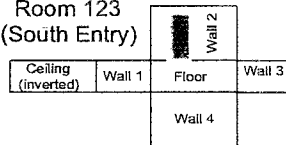
Room 123  
(Showers)



Room 123  
(Restroom)

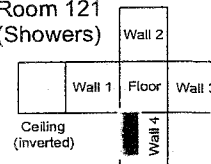


Room 123  
(South Entry)

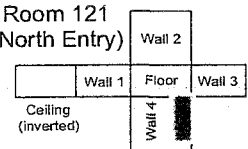


## Women's Locker Area (121)

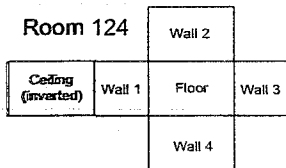
Room 121  
(Showers)



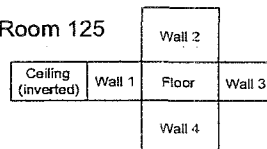
Room 121  
(North Entry)



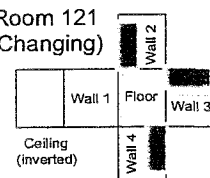
Room 124



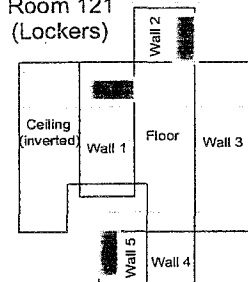
Room 125



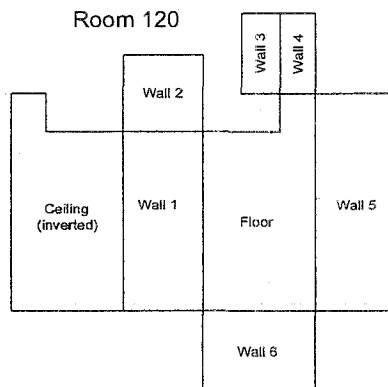
Room 121  
(Changing)



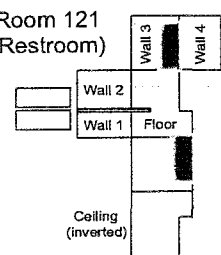
Room 121  
(Lockers)



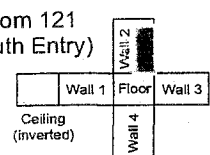
Room 120



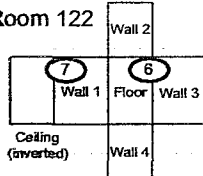
Room 121  
(Restroom)



Room 121  
(South Entry)



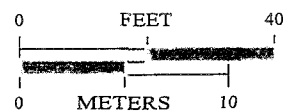
Room 122



### SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location

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1 inch = 30 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy  
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

Prepared for:

CH2MHILL  
Communications Group



MAP ID: 02-0888/B119-IN1-ASB

April 23, 2003

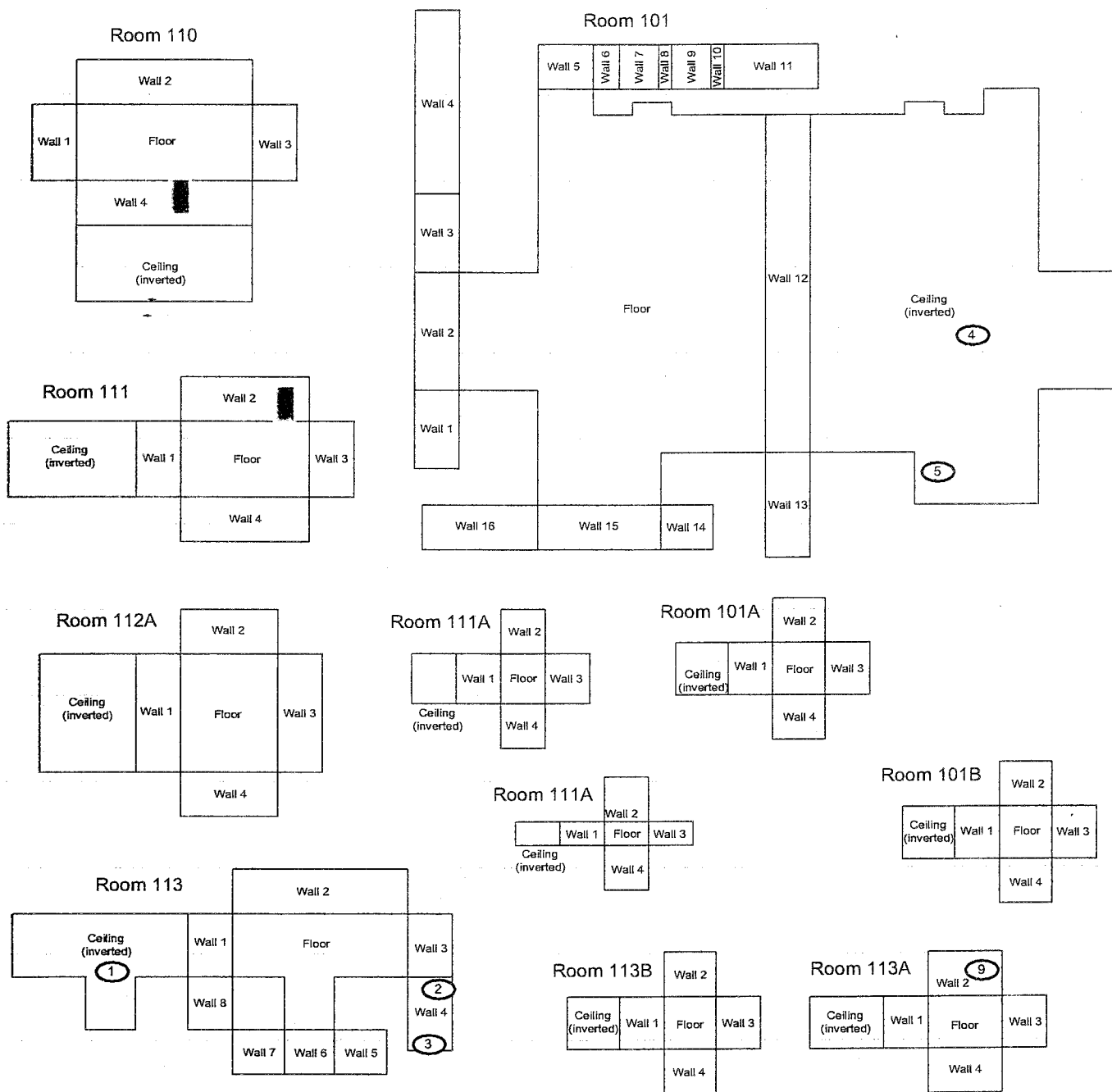
78



# CHEMICAL SAMPLE MAP

Building 119  
Asbestos

PAGE 2 OF 2

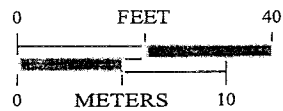


## SURVEY MAP LEGEND

- ① Asbestos Sample Location
- △ Beryllium Sample Location
- Lead Sample Location
- ◆ RCRA/CERCLA Sample Location
- ⊙ PCB Sample Location

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- Open/Inaccessible Area
- Area in Another Survey Unit



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Prepared for:

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MAP ID: 02-0888/B119-IN2-ASB

April 23, 2003

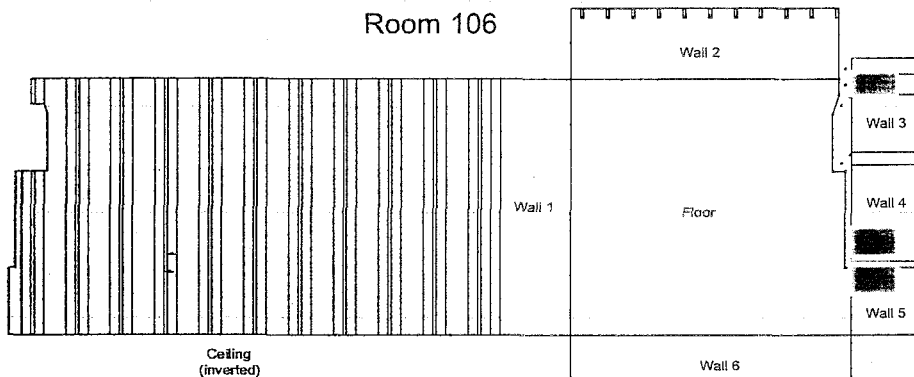


# CHEMICAL SAMPLE MAP

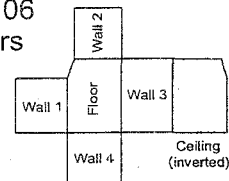
Building 121  
Asbestos

PAGE 1 OF 2

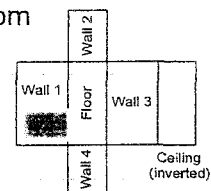
## Building 121 Interior



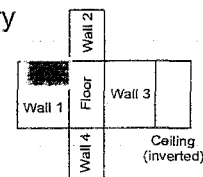
### Room 106 Showers



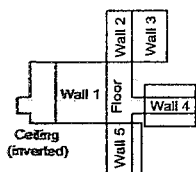
### Room 106 Bathroom



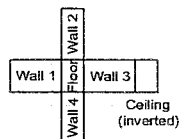
### Room 106 Entry



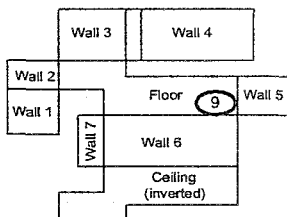
### Room 104



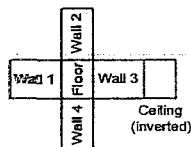
### Entry to Room 105



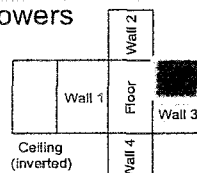
### West Hallway



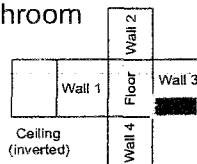
### West Entry



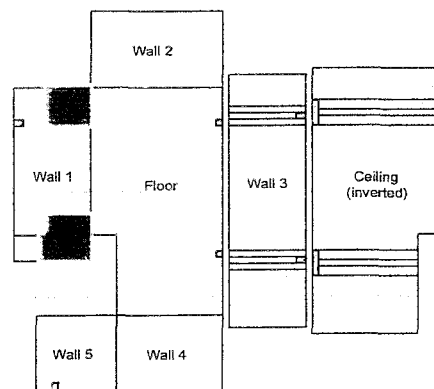
### Room 105 Showers



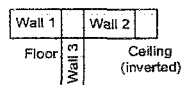
### Room 105 Bathroom



### Room 105



### Room 105 Entry

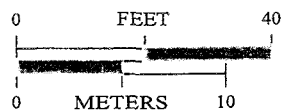
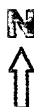


#### SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location

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- Open/Inaccessible Area
- Area in Another Survey Unit



1 inch = 30 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy  
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

Prepared for:

CH2MHILL  
Communications Group



MAP ID: 02-0888/B121-IN1

March 17, 2003

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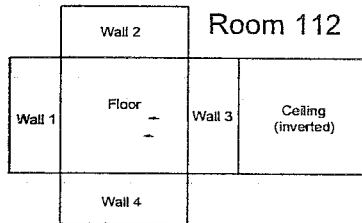
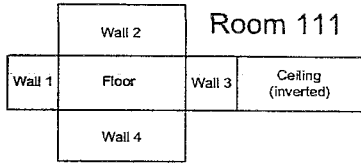


# CHEMICAL SAMPLE MAP

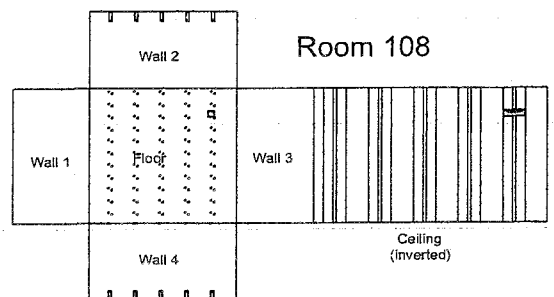
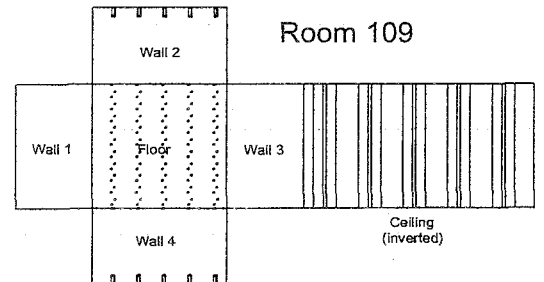
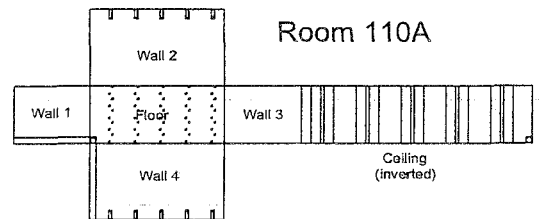
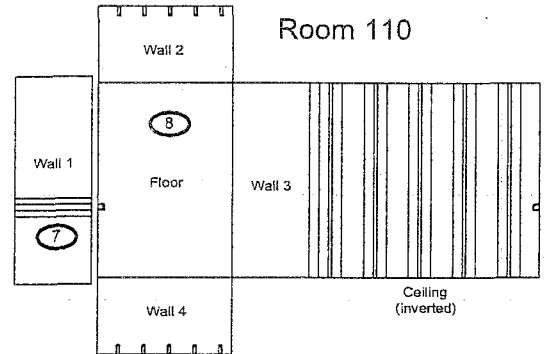
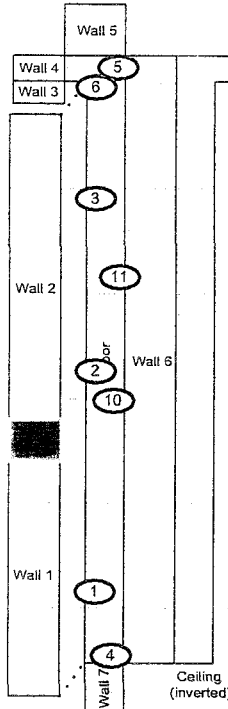
## Building 121 Interior Asbestos

PAGE 2 OF 2

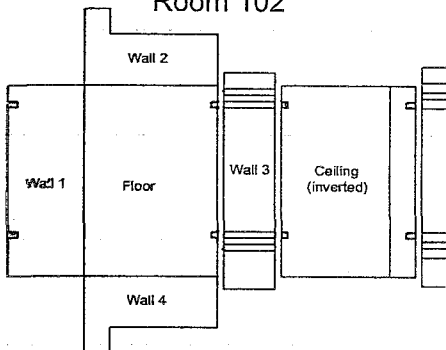
### Building 121 Interior



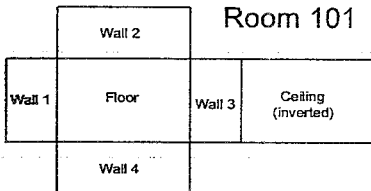
### Main Hallway



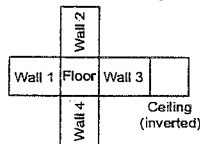
### Room 102



### Room 101



### South Entry

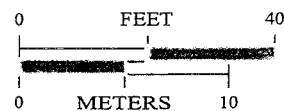


### SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location

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Open/Inaccessible Area  
Area in Another Survey Unit



1 inch = 30 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy  
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

Prepared for:

CH2M HILL  
Communications Group



MAP ID: 02-0888/B121-IN2-ASB

June 03, 2003

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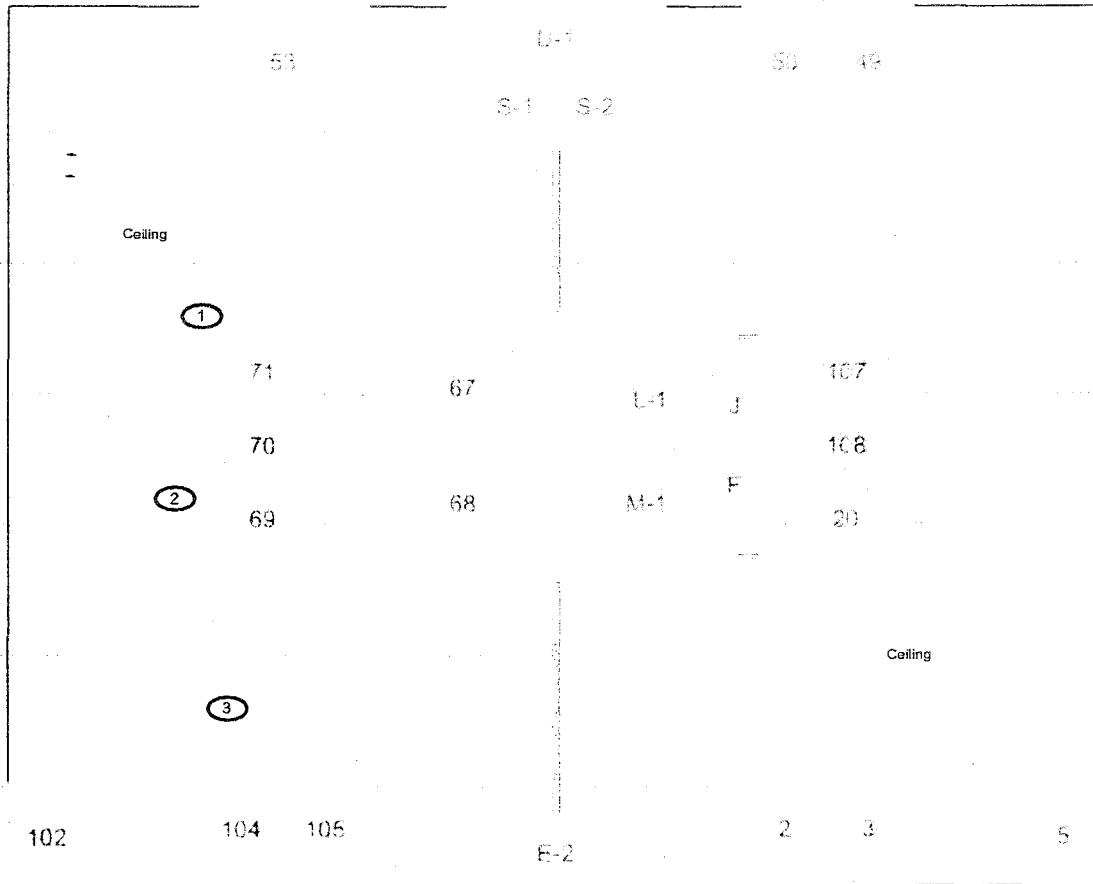


# CHEMICAL SAMPLE MAP

Building T124A Interior  
Asbestos

PAGE 1 OF 2

## T124A Interior (Ceiling)



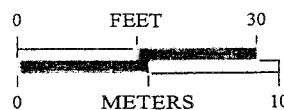
### SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location

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- Open/Inaccessible Area
- Area in Another Survey Unit



1 inch = 24 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy  
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

Prepared for:

CH2M HILL  
Communications Group



MAP ID: 02-0888/T124A-IN3-ASB

June 03, 2003

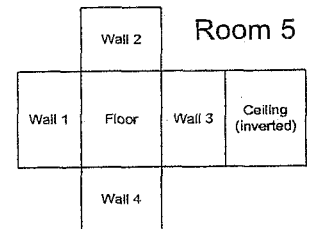
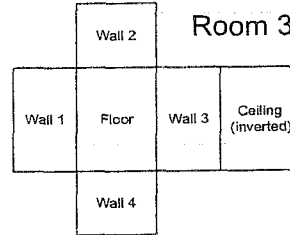
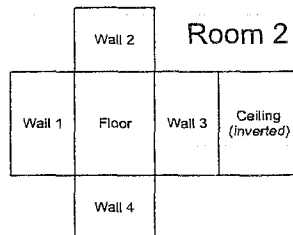
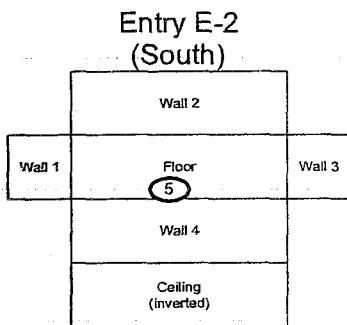
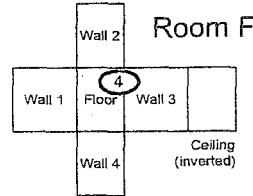
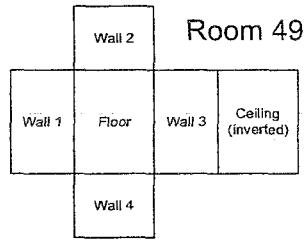
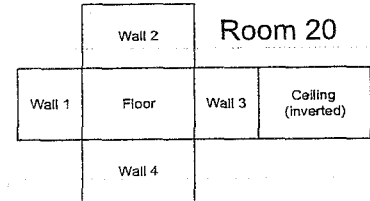
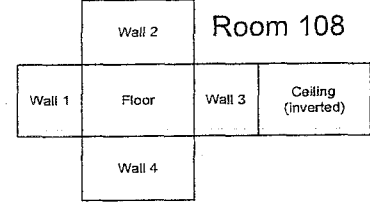
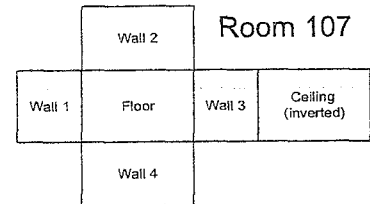
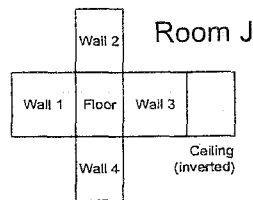
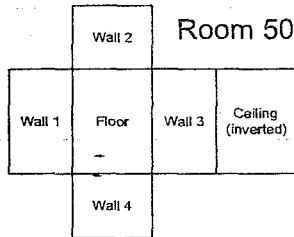


# CHEMICAL SAMPLE MAP

## Building T124A Interior Asbestos

PAGE 2 OF 2

### T124A Interior



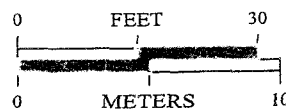
#### SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location

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Open/Inaccessible Area  
 Area in Another Survey Unit



1 inch = 24 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy  
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

Prepared for:

**CH2MHILL**  
Communications Group



MAP ID: 02-0888T124A-IN5-ASB

June 03, 2003



## Beryllium Data Summary

Sample Number	Map Survey Point Location	Room	Sample Location	Result (ug/100 cm <sup>2</sup> )
<b>Building T124A</b>				
T124A-04172003-315-101	1	Main	Top of fluorescent light fixture	< 0.1
T124A-04172003-315-102	2	Main	Top of fluorescent light fixture	< 0.1
T124A-04172003-315-103	3	Main	Top of fluorescent light fixture	< 0.1
T124A-04172003-315-104	4	Main	On louvers of ceiling HVAC diffuser	< 0.1
T124A-04172003-315-105	5	Main	Top of fluorescent light fixture	< 0.1
T124A-04172003-315-106	6	F	On sheet vinyl linoleum floor	< 0.1
T124A-04172003-315-107	7	Main	Top of refrigerator	< 0.1
T124A-04172003-315-108	8	E-2	On sheet vinyl linoleum floor	< 0.1
T124A-04172003-315-109	9	D-1	Top of Pepsi dispenser	< 0.1
T124A-04172003-315-110	10	53	On louvers of ceiling HVAC diffuser	< 0.1
<b>Building 122S</b>				
122S-04172003-315-101	1	Main	On metal horizontal brace, east wall	< 0.1
122S-04172003-315-102	2	Main	On metal horizontal brace, east wall	< 0.1
122S-04172003-315-103	3	Main	On metal horizontal brace, north wall	< 0.1
122S-04172003-315-104	4	Main	On concrete floor	< 0.1
122S-04172003-315-105	5	Main	On metal horizontal brace, south wall	< 0.1
<b>Building 119</b>				
119-04172003-315-101	1	113	Top of fluorescent light fixture	< 0.1
119-04172003-315-101	2	113	On louver of ceiling HVAC diffuser	< 0.1
119-04172003-315-101	3	101	Top of 2' x 4' white acoustical drop ceiling tile	< 0.1
119-04172003-315-101	4	120	Top of air handling unit	< 0.1
119-04172003-315-101	5	120	Top of air handling unit	< 0.1
119-04172003-315-101	6	120	Back of air handling unit at the east wall	< 0.1
119-04172003-315-101	7	122	On 12" vinyl floor tile	< 0.1
119-04172003-315-101	8	123	Top of metal locker #46	< 0.1
119-04172003-315-101	9	123	In SE corner on floor	< 0.1
119-04172003-315-101	10	101	At front door entrance, east wall	< 0.1
<b>Building 121</b>				
121-04172003-315-101	1	101	Top of LDSW speaker	< 0.1
121-04172003-315-102	2	109	On floor in NE corner	< 0.1
121-04172003-315-103	3	Men's Locker	Top of metal locker #54	< 0.1
121-04172003-315-104	4	106	On HVAC louvers	< 0.1
121-04172003-315-105	5	106	On HVAC louvers	< 0.1
121-04172003-315-106	6	Hall	Top of S-121-1 electrical panel	< 0.1
121-04172003-315-107	7	Hall	Top of 121-1-PD-01-5001 fire alarm panel	< 0.1
121-04172003-315-108	8	102	Top of steam pipe at floor, west wall	< 0.1



Sample Number	Map Survey Point Location	Room	Sample Location	Result (ug/100 cm <sup>2</sup> )
121-04172003-315-109	9	South Entry	Top of book case	< 0.1
121-04172003-315-110	10	Hall	On metal shelf	< 0.1
<b>Building 128</b>				
128-04172003-315-101	1	Main	Top of metal maintenance cabinet	< 0.1
128-04172003-315-101	2	Main	Top of blue metal cabinet #4	< 0.1
128-04172003-315-101	3	Main	Top of Toxgard CO monitor, north wall	< 0.1
128-04172003-315-101	4	Main	On security alarm box, north wall	< 0.1
128-04172003-315-101	5	Main	On concrete floor at east entrance	< 0.1
<b>Building 127</b>				
127-04172003-315-101	1	South	Top of generator	< 0.1
127-04172003-315-102	2	South	Top of Overflow Return	< 0.1
127-04172003-315-103	3	North	Top of APC	< 0.1
127-04172003-315-104	4	North	Top of electrical panel, west wall	< 0.1
127-04172003-315-105	5	North	On concrete floor	< 0.1
<b>Building T119B</b>				
T119B-04172003-315-101	1	North Breezeway	On sheet vinyl linoleum floor at north wall	< 0.1
T119B-04172003-315-102	2	91	On sheet vinyl linoleum floor	< 0.1
T119B-04172003-315-103	3	92	On sheet vinyl linoleum floor	< 0.1
T119B-04172003-315-104	4	South Breezeway	On louvers of ceiling HVAC diffuser	< 0.1
T119B-04172003-315-105	5	45	On louvers of ceiling HVAC diffuser	< 0.1
T119B-04172003-315-106	6	45	Top of fluorescent light fixture	< 0.1
T119B-04172003-315-107	7	Main	Top of metal file cabinet, west wall	< 0.1
T119B-04172003-315-108	8	North Breezeway	Top of Exit sign	< 0.1
T119B-04172003-315-109	9	South Breezeway	Top of Exit sign	< 0.1
T119B-04172003-315-110	10	South Breezeway	On window sill, south wall	< 0.1

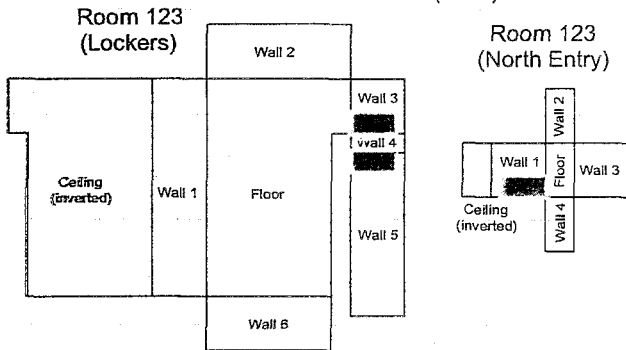


# CHEMICAL SAMPLE MAP

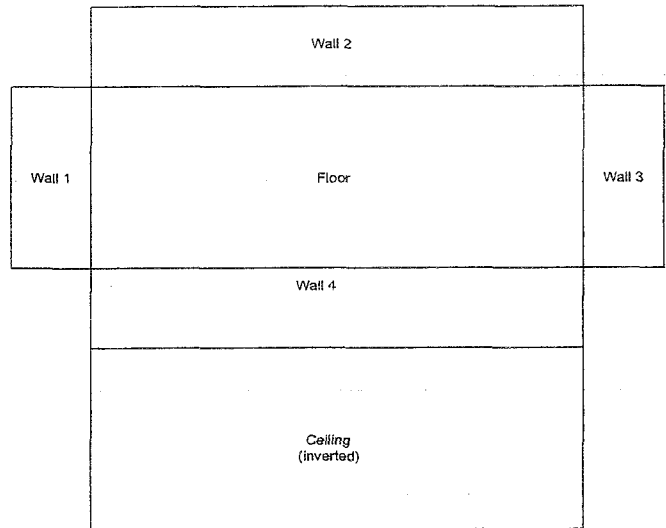
Building 119  
Beryllium

PAGE 1 OF 2

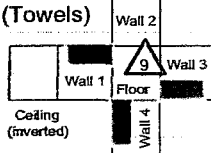
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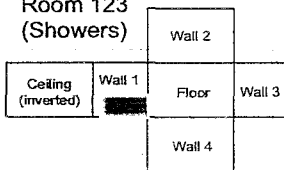
## Room 130



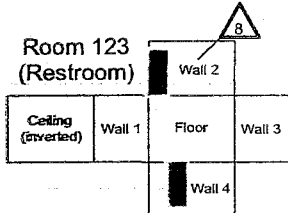
## Room 123 (Towels)



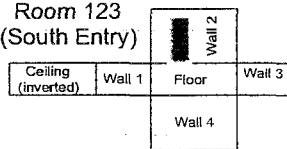
## Room 123 (Showers)



## Room 123 (Restroom)

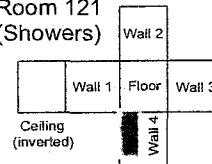


## Room 123 (South Entry)

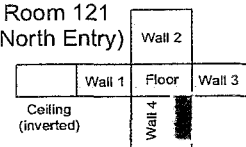


## Women's Locker Area (121)

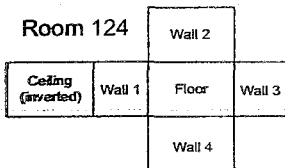
### Room 121 (Showers)



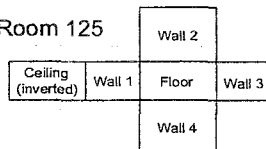
### Room 121 (North Entry)



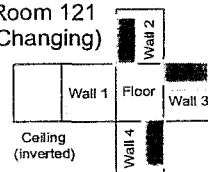
## Room 124



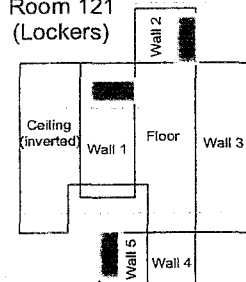
## Room 125



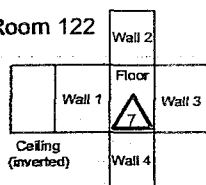
### Room 121 (Changing)



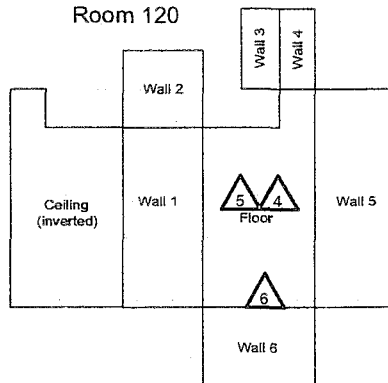
### Room 121 (Lockers)



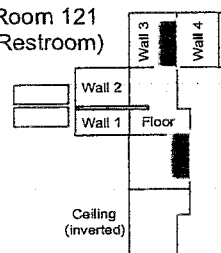
## Room 122



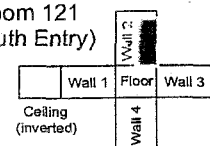
## Room 120



### Room 121 (Restroom)



### Room 121 (South Entry)

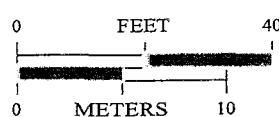


### SURVEY MAP LEGEND

- Asbestos Sample Location
- ▲ Beryllium Sample Location
- Lead Sample Location
- ◆ RCRA/CERCLA Sample Location
- ⊙ PCB Sample Location

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1 inch = 30 feet 1 grid sq. = 1 sq. m.

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Prepared for:

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MAP ID: 02-0888/B119-IN1-BE

April 23, 2003

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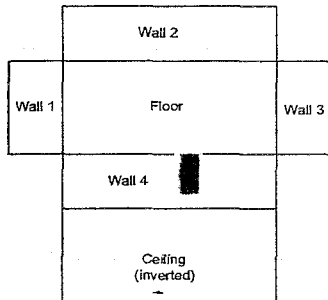


# CHEMICAL SAMPLE MAP

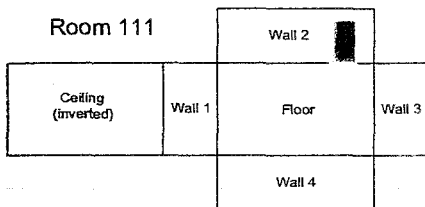
Building 119  
Beryllium

PAGE 2 OF 2

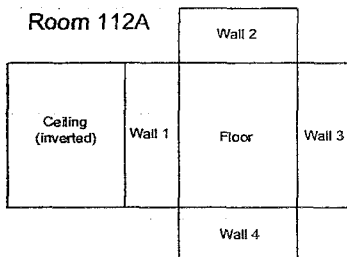
Room 110



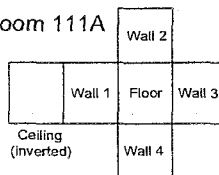
Room 111



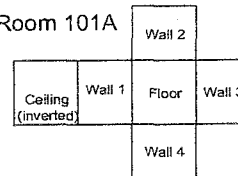
Room 112A



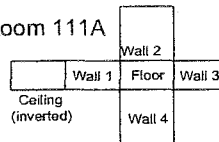
Room 111A



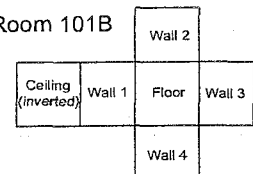
Room 101A



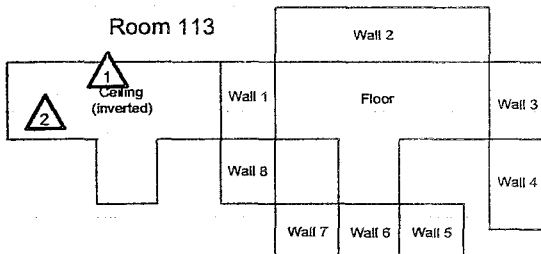
Room 111A



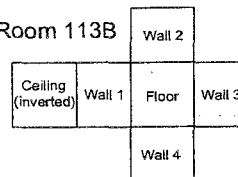
Room 101B



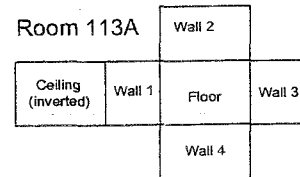
Room 113



Room 113B



Room 113A

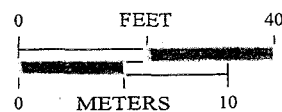


## SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location

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U.S. Department of Energy  
Rocky Flats Environmental Technology Site

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Prepared for:

CH2M HILL  
Communications Group



MAP ID: 02-0888/B119-IN2-BE

April 23, 2003

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## PAGE 1 OF 3

### SURVEY MAP LEGEND

- April 23, 2003**

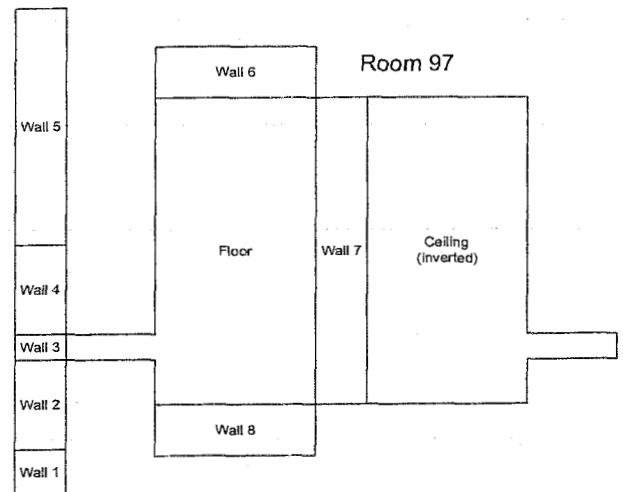
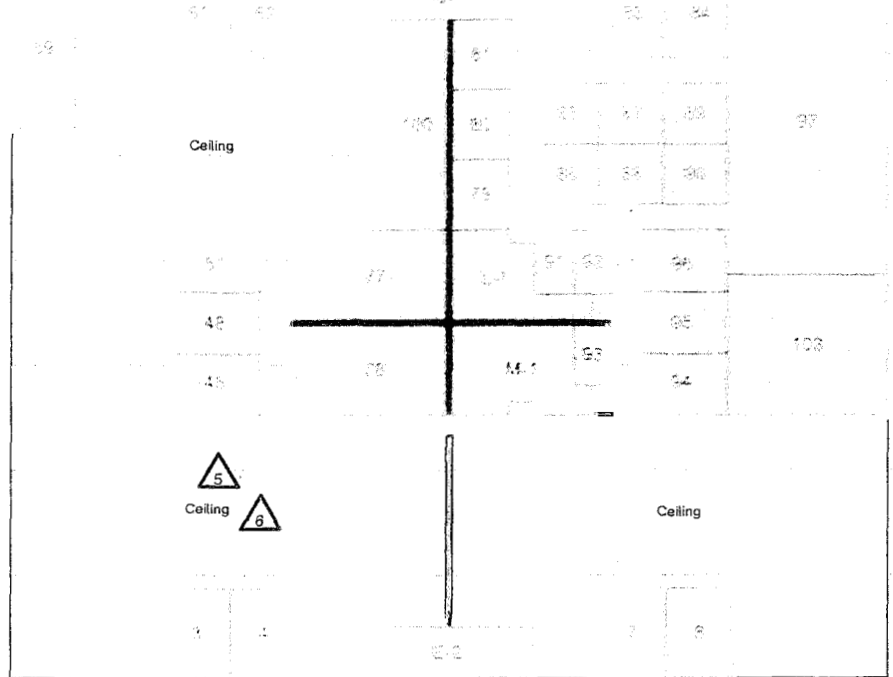
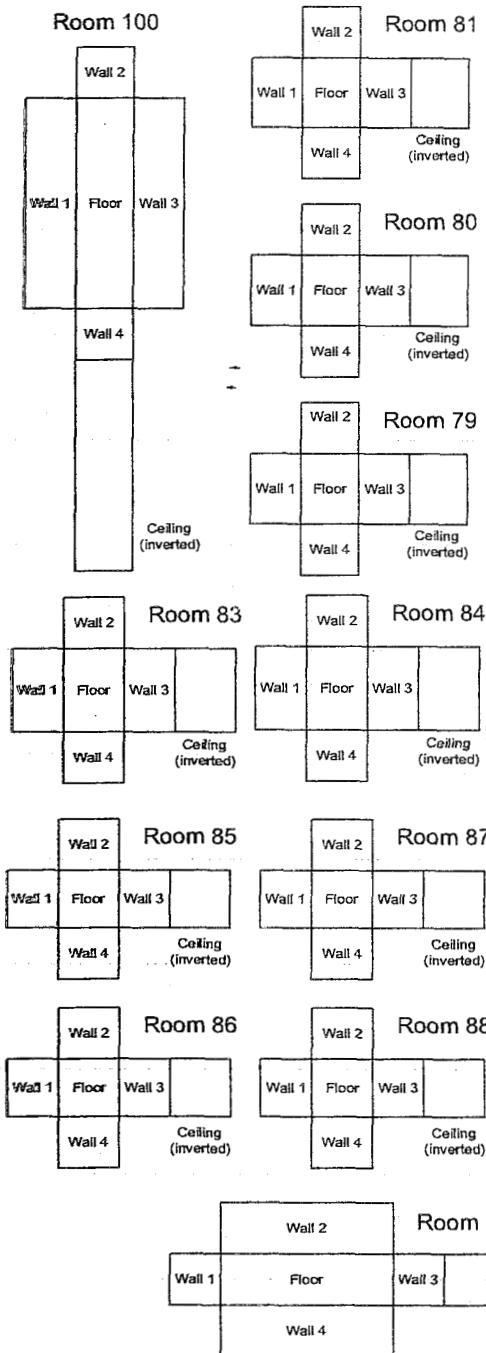


# CHEMICAL SAMPLE MAP

Building T119B  
Beryllium

PAGE 2 OF 3

## Trailer 119B Interior



<b>SURVEY MAP LEGEND</b> # Asbestos Sample Location ▲ Beryllium Sample Location * Lead Sample Location ◆ RCRA/CERCLA Sample Location # PCB Sample Location	Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.	  1 inch = 30 feet 1 grid sq. = 1 sq. m.	U.S. Department of Energy Rocky Flats Environmental Technology Site Prepared by: GIS Dept. 303-966-7707 CH2MHILL Communications Group MAP ID: 02-0888/T119B-IN2-BE Prepared for: April 23, 2003
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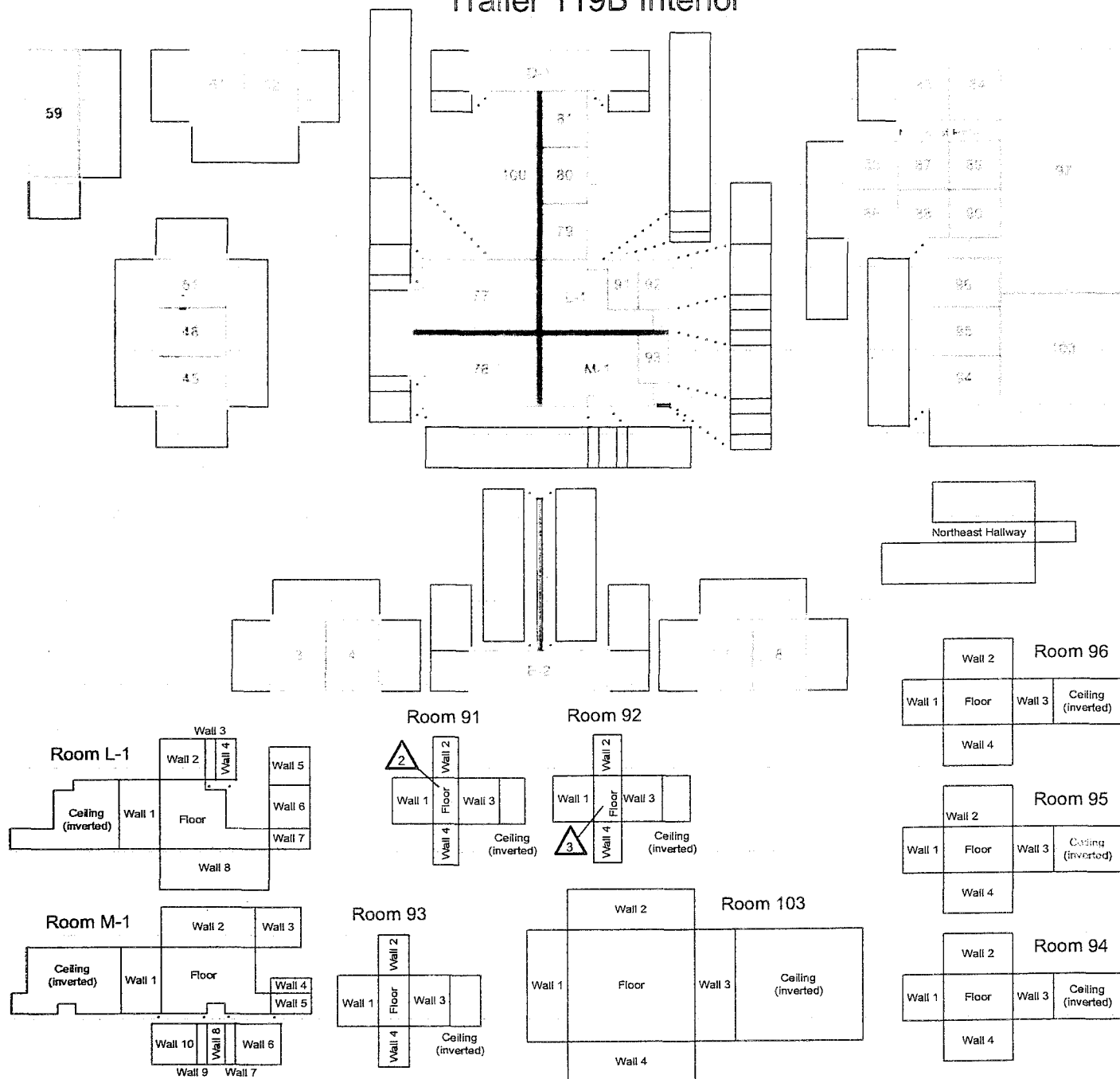


# CHEMICAL SAMPLE MAP

Building T119B  
Beryllium

PAGE 3 OF 3

## Trailer 119B Interior



<p><b>SURVEY MAP LEGEND</b></p> <ul style="list-style-type: none"> <li>Asbestos Sample Location</li> <li>Beryllium Sample Location</li> <li>Lead Sample Location</li> <li>RCRA/CERCLA Sample Location</li> <li>PCB Sample Location</li> <li>Open/Inaccessible Area</li> <li>Area in Another Survey Unit</li> </ul>	<p>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&amp;ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.</p> <p>N ↑</p>	<p>0 FEET 40</p> <p>0 METERS 10</p> <p>1 inch = 30 feet 1 grid sq. = 1 sq. m.</p>	<p>U.S. Department of Energy Rocky Flats Environmental Technology Site</p> <p>Prepared by: GIS Dept. 303-966-7707</p> <p>CH2M HILL Communications Group</p> <p>MAP ID: 02-0888/T119B-IN3-BE</p> <p>Prepared for:</p> <p>APRIL 23, 2003</p>
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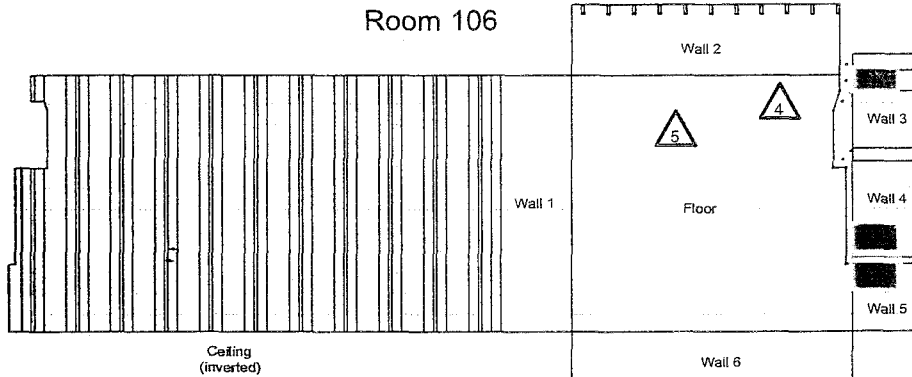


# CHEMICAL SAMPLE MAP

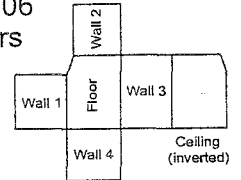
## Building 121 Interior Beryllium

PAGE 1 OF 2

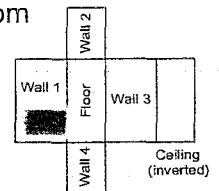
### Building 121 Interior



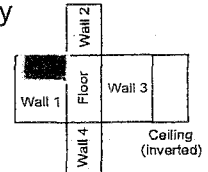
### Room 106 Showers



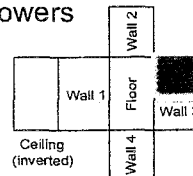
### Room 106 Bathroom



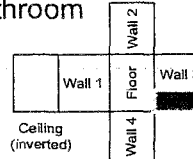
### Room 106 Entry



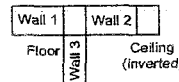
### Room 105 Showers



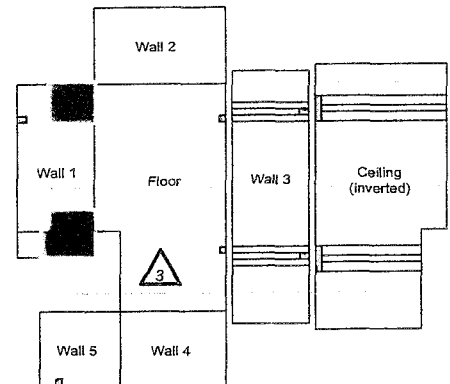
### Room 105 Bathroom



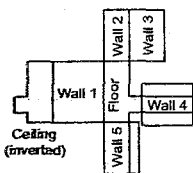
### Room 105 Entry



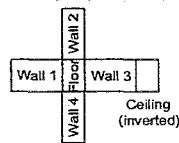
### Room 105



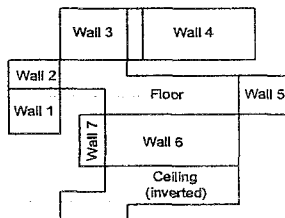
### Room 104



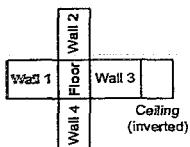
### Entry to Room 105



### West Hallway



### West Entry

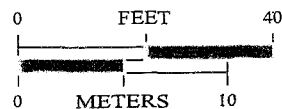


#### SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location

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- Open/Inaccessible Area
- Area in Another Survey Unit



1 inch = 30 feet 1 grid sq. = 1 sq. m.

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Prepared for:

CH2MHILL  
Communications Group

MAP ID: 02-0888/B121-IN1-BE

June 03, 2003

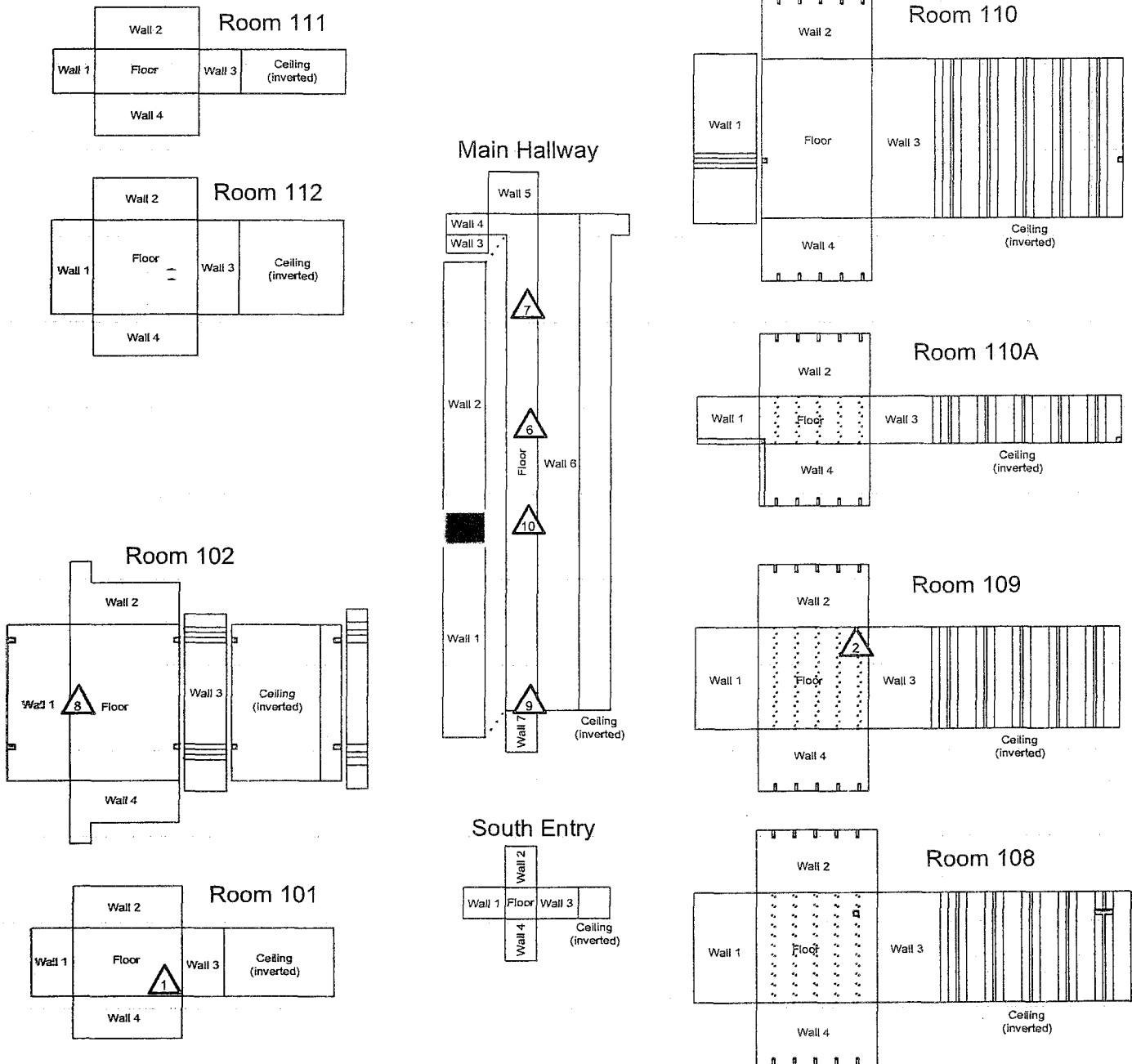


# CHEMICAL SAMPLE MAP

## Building 121 Interior Beryllium

PAGE 2 OF 2

### Building 121 Interior



<b>SURVEY MAP LEGEND</b> (A) Asbestos Sample Location (B) Beryllium Sample Location (C) Lead Sample Location (D) RCRA/CERCLA Sample Location (E) PCB Sample Location (F) Open/Inaccessible Area (G) Area in Another Survey Unit	Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.	N 0 10 20 30 40 FEET 0 10 20 30 40 METERS 1 inch = 30 feet 1 grid sq. = 1 sq. m.	U.S. Department of Energy Rocky Flats Environmental Technology Site Prepared by: GIS Dept. 303-966-7707 Prepared for: CH2M HILL Communications Group MAP ID: 02-0888/B121-IN2-BE June 03, 2003
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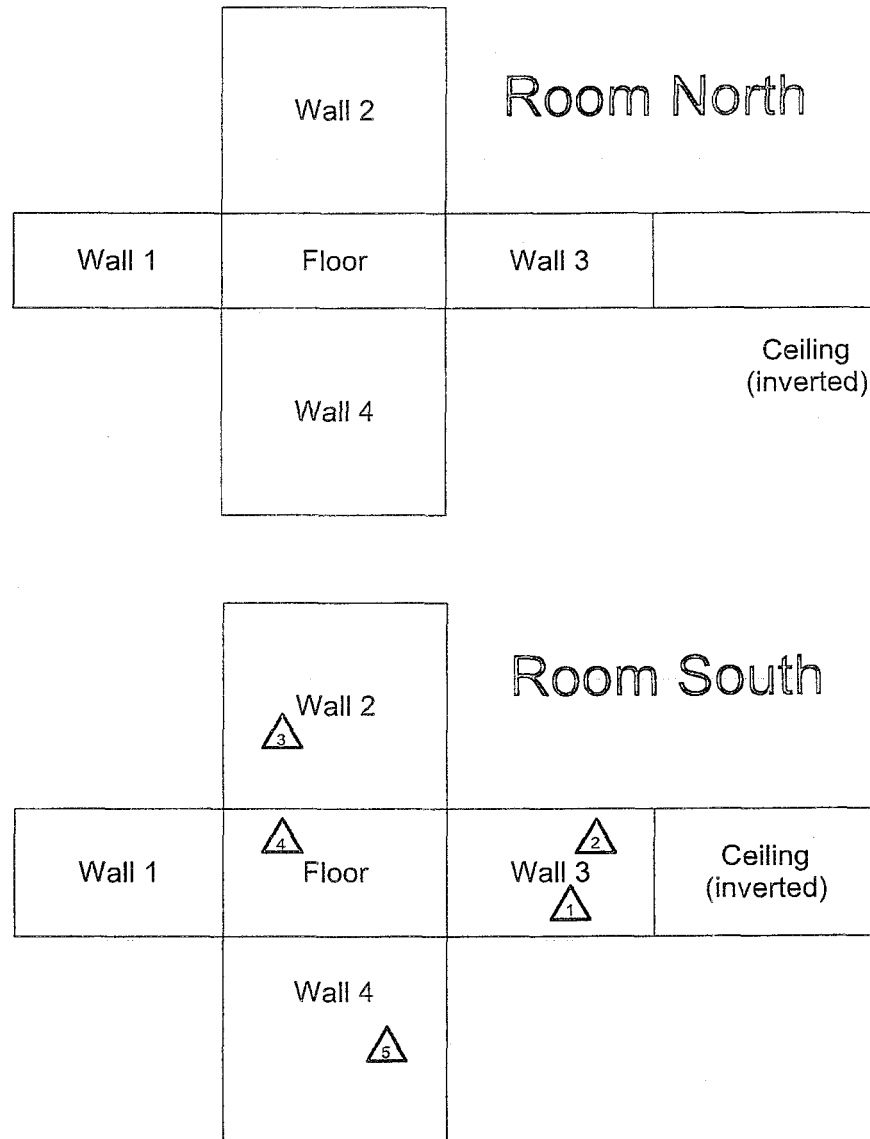


# CHEMICAL SAMPLE MAP

Building 122S Interior  
Beryllium

PAGE 1 OF 1

## B122S Interior



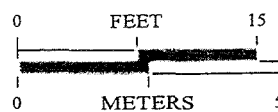
### SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location

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- Open/Inaccessible Area
- Area in Another Survey Unit



1 inch = 12 feet 1 grid sq. = 1 sq. m.

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June 03, 2003

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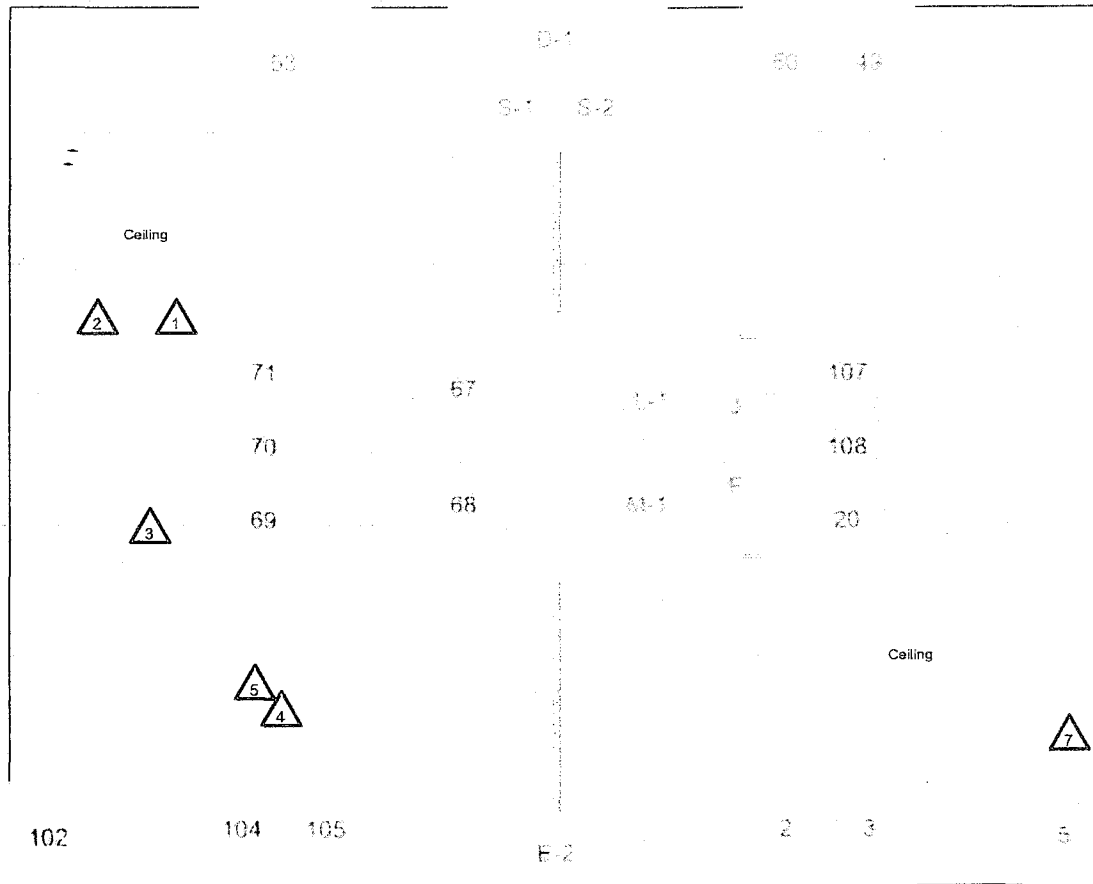


# CHEMICAL SAMPLE MAP

Building T124A Interior  
Beryllium

PAGE 1 OF 3

## T124A Interior (Ceiling)

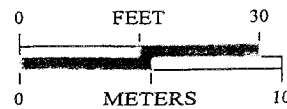


### SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location

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- Open/Inaccessible Area
- Area in Another Survey Unit



1 inch = 24 feet 1 grid sq. = 1 sq. m.

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MAP ID: 02-0888T124A-IN3-BE

June 04, 2003

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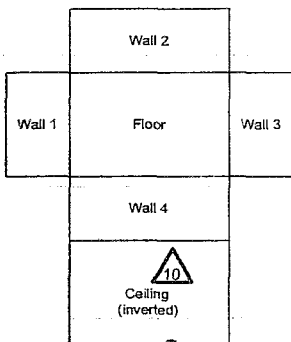


# CHEMICAL SAMPLE MAP

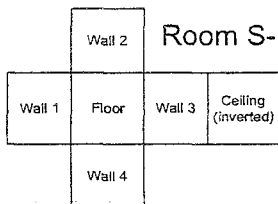
## Building T124A Interior Beryllium

PAGE 2 OF 3

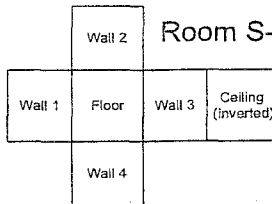
Room 53



Room S-1

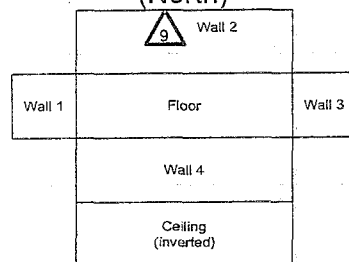


Room S-2

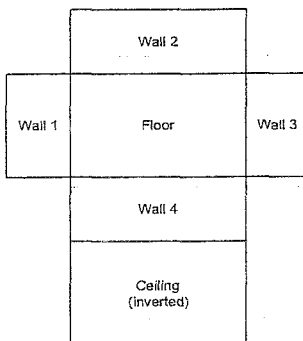


T124A Interior

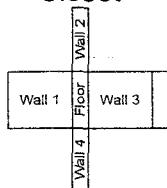
Entry D-1  
(North)



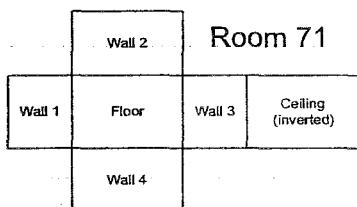
Room 67



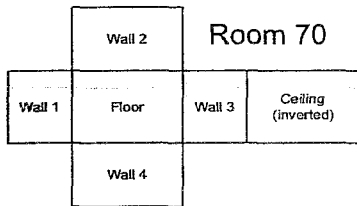
Room 67  
Closet



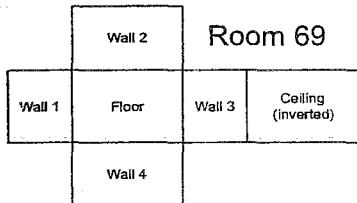
Room 71



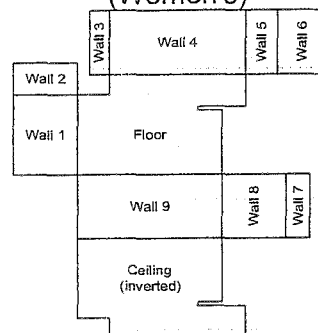
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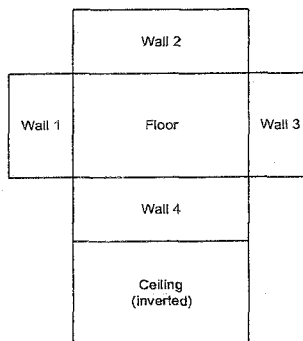
Room 69



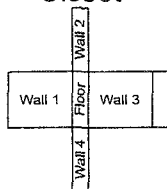
Room L-1  
(Women's)



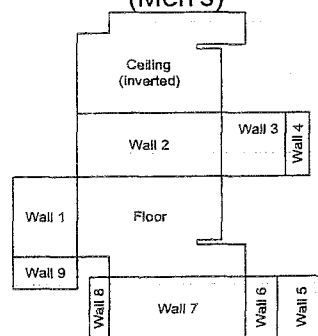
Room 68



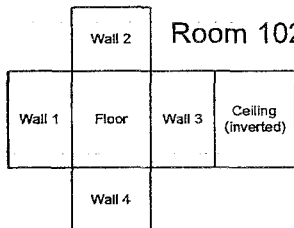
Room 68  
Closet



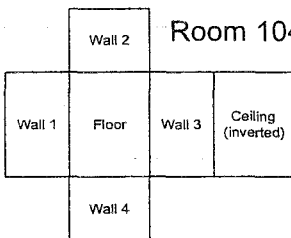
Room M-1  
(Men's)



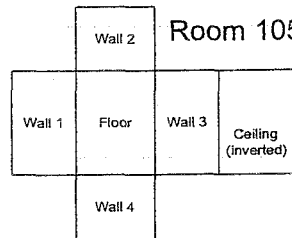
Room 102



Room 104



Room 105



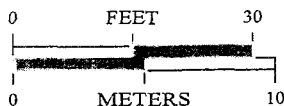
### SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location

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- Open/Inaccessible Area
- Area in Another Survey Unit



1 inch = 24 feet 1 grid sq. = 1 sq. m.

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Prepared for:

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Communications Group

MAP ID: 02-0888T124A-IN-4-BE

June 03, 2003

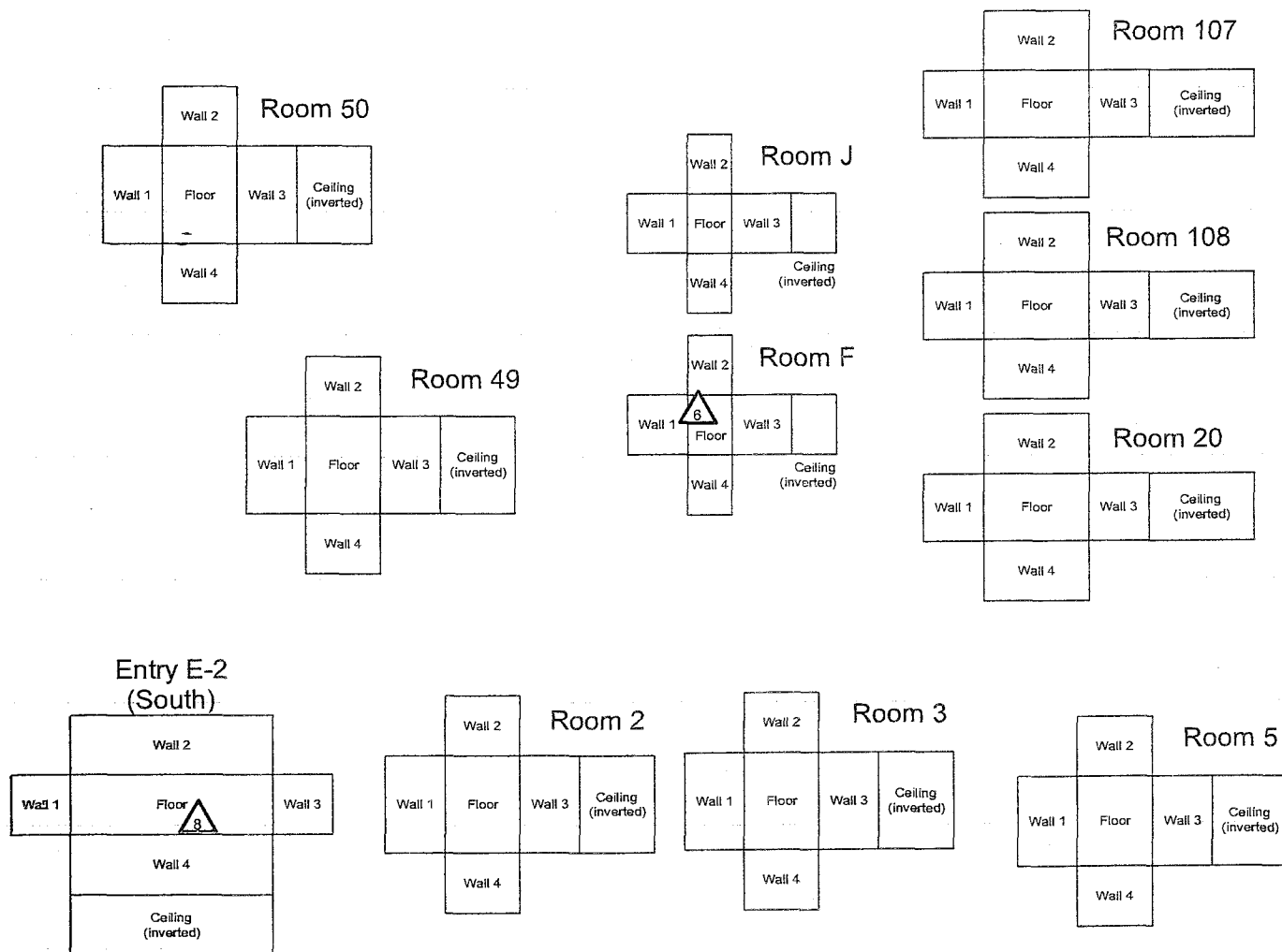


# CHEMICAL SAMPLE MAP

Building T124A Interior  
Beryllium

PAGE 3 OF 3

## T124A Interior



### SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location

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Open/Inaccessible Area  
Area in Another Survey Unit



1 inch = 24 feet 1 grid sq. = 1 sq. m.

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MAP ID: 02-0888T124A-IN5-BE

June 03, 2003

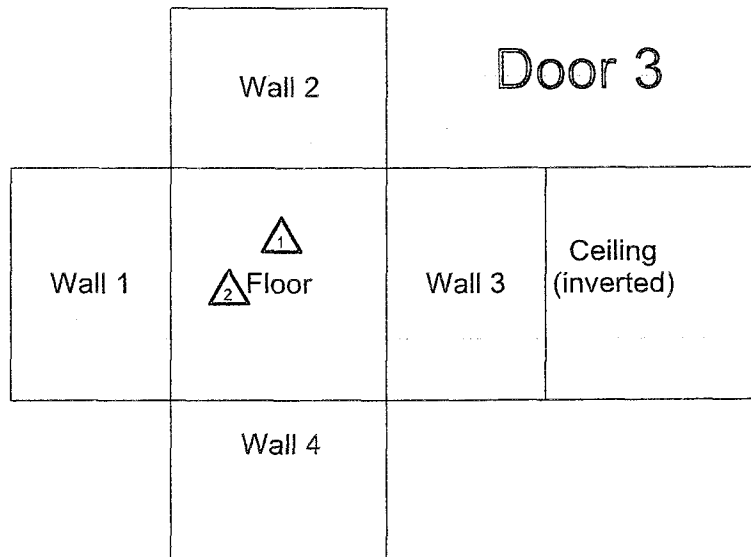
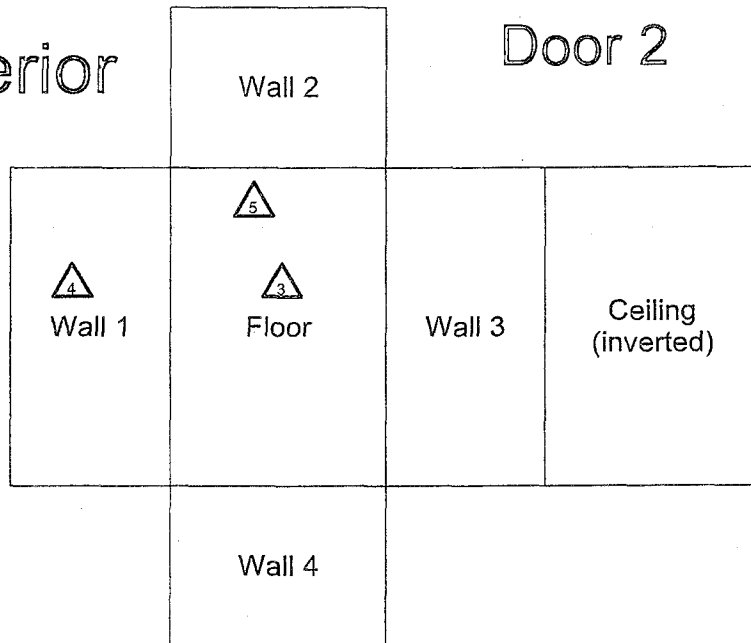


# CHEMICAL SAMPLE MAP

Building 127 Interior  
Beryllium

PAGE 1 OF 1

B127 Interior

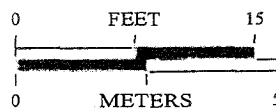


## SURVEY MAP LEGEND

- Asbestos Sample Location
- Beryllium Sample Location
- Lead Sample Location
- RCRA/CERCLA Sample Location
- PCB Sample Location

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- Open/Inaccessible Area
- Area in Another Survey Unit



1 inch = 12 feet 1 grid sq. = 1 sq. m.

U.S. Department of Energy  
Rocky Flats Environmental Technology Site

Prepared by: GIS Dept. 303-966-7707

Prepared for:

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Communications Group

MAP ID: 02-0888/B127-IN-BE

June 03, 2003

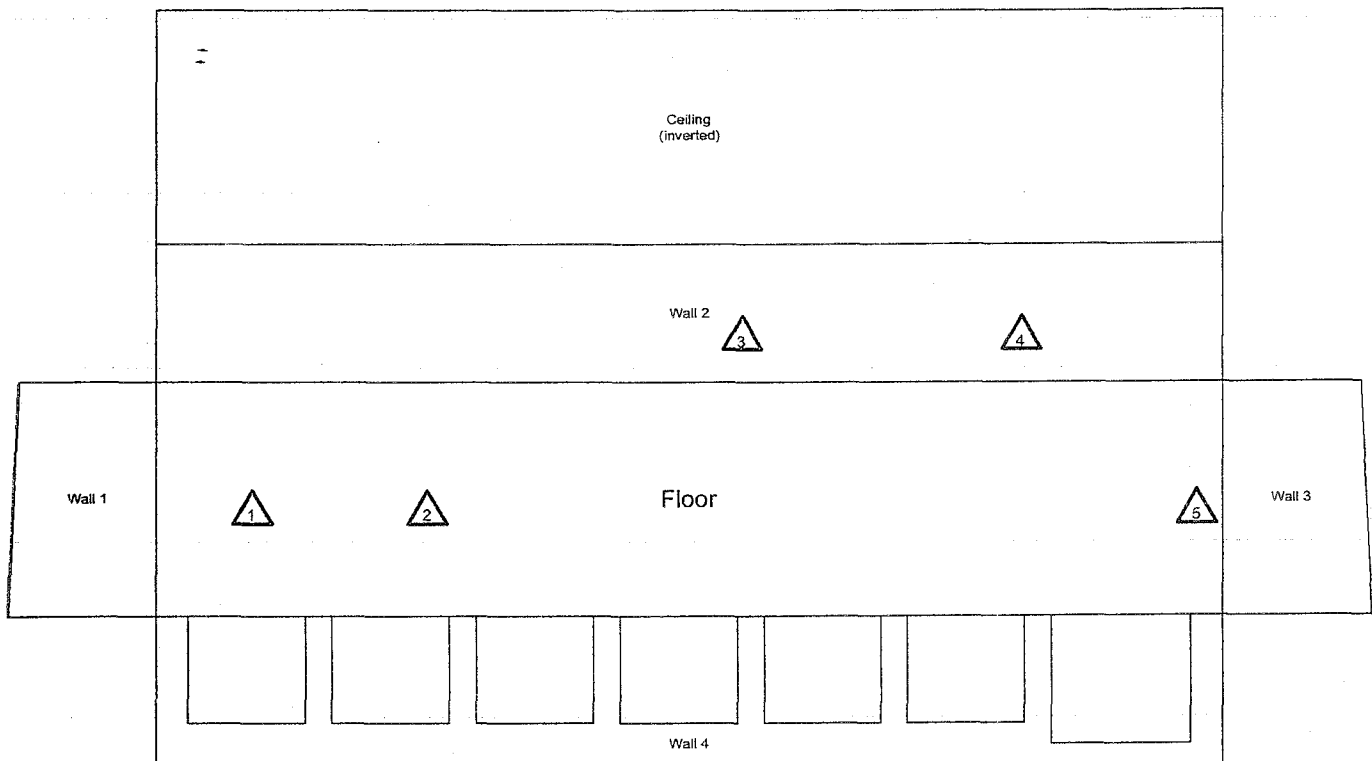


# CHEMICAL SAMPLE MAP

Building 128 Interior  
Beryllium

PAGE 1 OF 1

## B128 Interior



SURVEY MAP LEGEND		U.S. Department of Energy Rocky Flats Environmental Technology Site		
Asbestos Sample Location	<small>Neither the United States Government nor Kaiser Hill Co., nor DynCorp I&amp;ET, nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.</small>			
Beryllium Sample Location				
Lead Sample Location				
RCRA/CERCLA Sample Location		Open/Inaccessible Area		
PCB Sample Location		Area in Another Survey Unit		
		1 inch = 18 feet 1 grid sq. = 1 sq. m.		
		Prepared by: GIS Dept. 303-866-7707 Prepared for:		
		MAP ID: 02-0888/B128-IN-BE June 03, 2003		



# ATTACHMENT E

## Data Quality Assessment (DQA) Detail



## **DATA QUALITY ASSESSMENT (DQA)**

### **VERIFICATION & VALIDATION OF RESULTS**

V&V of the data confirm that appropriate quality controls are implemented throughout the sampling and analysis process, and that any substandard controls result in qualification or rejection of the data in question. The required quality controls and their implementation are summarized in a tabular, checklist format for each category of data – radiological surveys and chemical analyses (specifically asbestos and beryllium.)

DQA criteria and results are provided in a tabular format for each suite of surveys or chemical analyses performed; the radiological survey assessment is provided in Table E-1, asbestos in E-2 and beryllium in E-3. A data completeness summary for all results is given in Table E-4.

All relevant Quality records supporting this report are maintained in the RISS Characterization Project Files. This report will be submitted to the CERCLA Administrative Record for permanent storage within 30 days of approval by the Regulators. All radiological data are organized into Survey Packages, which correlate to unique (MARSSIM) Survey Units. Chemical data are organized by RIN (Report Identification Number) and are traceable to the sample number and corresponding sample location.

Beta/gamma survey designs were not implemented for the Area 5 - Group 3 Facilities based on the conservatism of the transuranic limits used as DCGLs in the unrestricted release decision process. Survey designs were implemented based on the transuranic limits used as DCGLs in the unrestricted release decision process. All survey results were evaluated against, and were less than the Transuranic DCGL<sub>w</sub> (100 dpm/100cm<sup>2</sup>) and the Uranium DCGL<sub>w</sub> (5,000 dpm/100cm<sup>2</sup>) unrestricted release limits.

Consistent with EPA's G-4 DQO process, the radiological survey design (for those survey units performed per PDS requirements) was optimized by checking actual measurement results (acquired during pre-demolition surveys) against model output with original estimates. Use of actual sample/survey (result) variances in the MARSSIM DQO model confirms that an adequate number of surveys were acquired.

### **SUMMARY**

In summary, the data presented in this report have been verified and validated relative to the quality requirements and project decisions as stated in the original DQOs. All data are useable based on qualifications stated herein and are considered satisfactory without qualification. All media surveyed and sampled yielded results less than their associated action levels and with acceptable uncertainties. However, the following constituent was greater than unrestricted release levels:



- Asbestos containing material greater than 1% by volume was identified in Building 121. The ACM was determined to be friable asbestos containing plaster and paint on the cinderblock walls of Building 121 (3 % Chrysotile or 1.5 % Chrysotile by *Point Count*). The ACM will be managed and disposed of in accordance with applicable EPA and CDPHE regulations. Refer to Section 4.1 and Attachment D for additional ACM data.

Based upon an independent review of the radiological data, it is determined that the original project DQOs satisfied MARSSIM guidance. All facility contamination levels were below applicable unrestricted release levels (except as noted above). Minimum survey requirements were met, sampling/survey protocol was performed in accordance with applicable procedures, survey units were properly designed and bounded, and instrument performance and calibration were within acceptable limits. All results meet the PDS unrestricted release criteria.

Chain of Custody was intact; documentation was complete, hold times were acceptable (where applicable,) and packaging integrity/custody seals were maintained throughout the sampling/analysis process. Level 2 Isolation Controls have been posted to prevent the inadvertent introduction of contamination into the facility. On this basis, the Area 5 - Group 3 facilities meet the unrestricted release criteria with the confidences stated herein.



**Table E-1 V&V of Radiological Results, Area 5 - Group 3 Facilities**

V&V CRITERIA, RADIOLOGICAL SURVEYS		K-H RSP 16.00 Series MARSSIM (NUREG-1575)		
QUALITY REQUIREMENTS				
	Parameters	Measure	frequency	COMMENTS
ACCURACY	initial calibrations	90%<x<110%	≥1	Multi-point calibration through the measurement range encountered in the field; programmatic records.
	daily source checks	80%<x<120%	≥1/day	Performed daily/within range.
	local area background: Field	typically < 10 dpm	≥ 1/day	All local area backgrounds were within expected ranges (i.e., no elevated anomalies.)
PRECISION	field duplicate measurements for TSA	≥ 5% of real survey points	≥ 10% of reals	N/A
REPRESENTATIVENESS	MARSSIM methodology: Survey Units 119-5-001, T119B-5-002, 121-5-003, 122S-5-005, T124A-5-006, 127-5-007 and 128-5-008. Survey Maps	statistical and biased	NA	Random w/ statistical confidence.
COMPARABILITY	Controlling Documents (Characterization Pkg; RSPs)	qualitative	NA	Refer to the Characterization Package (planning document) for field/sampling procedures (located in Project files); thorough documentation of the planning, sampling/analysis process, and data reduction into formats.
	units of measure	dpm/100cm <sup>2</sup>	NA	Use of standardized engineering units in the reporting of measurement results.
COMPLETENESS	Plan vs. Actual surveys usable results vs. unusable	>95% >95%	NA	See Table E-4 for details.
SENSITIVITY	detection limits	TSA: ≤50 dpm/100cm <sup>2</sup> RA: ≤10 dpm/100cm <sup>2</sup>	all measures	MDAs ≤ 50% DCGL <sub>w</sub> per MARSSIM guidelines.



**Table E-2 V&V of Asbestos Results, Area 5 - Group 3 Facilities**

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE		COMMENTS
ASBESTOS	METHOD: EPA 600/R-93/116	LAB ---->	Reservoirs Environmental, Inc	
		RIN ---->	RIN03Z1511	
QUALITY REQUIREMENT		Measure	Frequency	
ACCURACY	Calibrations: Initial/continuing	Below detectable amounts	≥ 1	Semi-quantitative, per (microscopic) visual estimation.
PRECISION	Actual Number Sampled LCSD Lab duplicates	all below detectable amounts	≥ 25 samples	Semi-quantitative, per (microscopic) visual estimation.
REPRESENTATIVENESS	COC	Qualitative	NA	Chain-of-Custody intact: completed paperwork, containers w/ custody seals.
	Hold times/preservation	Qualitative	NA	N/A
	Controlling Documents (Plans, Procedures, maps, etc.)	Qualitative	NA	See original Chemical Characterization Package (planning document); for field/sampling procedures (located in project file;) thorough documentation of the planning, sampling/analysis process, and data reduction into formats.
COMPARABILITY	Measurement Units	% by bulk volume	NA	Use of standardized engineering units in the reporting of measurement results.
COMPLETENESS	Plan vs. Actual samples Usable results vs. unusable	Qualitative	NA	See Table E-4; final number of samples at Certified Inspector's discretion.
SENSITIVITY	Detection limits	<1% by volume	all measures	N/A



**Table E-3 V&V of Beryllium Result, Area 5 - Group 3 Facilities**

V&V CRITERIA, CHEMICAL ANALYSES		DATA PACKAGE		No qualifications significant enough to change project decisions, i.e., classification of Type I facilities confirmed. All results were below associated action levels.
BERYLLIUM	Prep: NMAM 7300 METHOD: OSHA ID-125G	LAB ---->	Reservoirs Environmental, Inc. RIN ---->	
	QUALITY REQUIREMENTS			
ACCURACY	Calibrations	Measure	frequency	
	Initial	linear calibration	≥1	
	Continuing	80%≤%R<120%	≥1	
	LCS/MS	80%≤%R<120%	≥1	
	Blanks - lab & field	<MDL	≥1	
PRECISION	interference check std (ICP)	NA	NA	
	LCS/D	80%≤%R<120% (RPD<20%)	≥1	
	field duplicate	all results < RL	≥1	
REPRESENTATIVENESS	COC	Qualitative	NA	
	hold times/preservation	Qualitative	NA	
COMPARABILITY	Controlling Documents (Plans, Procedures, maps, etc.)	Qualitative	NA	
	measurement units	ug/100cm <sup>2</sup>	NA	
COMPLETENESS	Plan vs. Actual samples usable results vs. unusable	>95%	NA	
	detection limits	MDL of 0.012 ug/100cm <sup>2</sup>	all measures	



**Table E-4 Data Completeness Summary, Area 5 - Group 3 Facilities**

ANALYTE	Building/Area/ Unit	Sample Number Planned (Real & QC) <sup>A</sup>	Sample Number Taken (Real & QC)	Project Decisions (Conclusions) & Uncertainty	Comments (RIN, Analytical Method, Qualifications, etc.)
Asbestos	Building 119	6 biased (interior)	9 biased (interior)	No ACM present, all results < 1% by volume	40 CFR763.86; 5 CCR 1001-10; EPA 600/R-93/116 RIN03Z1511
Asbestos	Building 121	12 biased (interior)	11 biased (interior)	ACM present, results > 1% by volume  (ACM > 1% by volume at one location)	40 CFR763.86; 5 CCR 1001-10; EPA 600/R-93/116 RIN03Z1511  ACM identified in Building 121 at one location (sample number 121-04162003-315-207) that was greater than 1% by volume: 3% Chrysotile and 1.5 point count (white plaster with white/green paint on cinder block).
Asbestos	Building T124A	6 biased (interior)	5 biased (interior)	No ACM present, all results < 1% by volume	40 CFR763.86; 5 CCR 1001-10; EPA 600/R-93/116 RIN03Z1511
Beryllium	Building 119	10 biased (interior)	10 biased (interior)	No contamination found, all results are less than associated action levels	OSHA ID-125G – RIN03Z1512  No results above action level (0.2ug/100cm <sup>2</sup> ) or investigative level (0.1 ug/100cm <sup>2</sup> ).
Beryllium	Building T119A	10 biased (interior)	10 biased (interior)	No contamination found, all results are less than associated action levels	OSHA ID-125G – RIN03Z1512  No results above action level (0.2ug/100cm <sup>2</sup> ) or investigative level (0.1 ug/100cm <sup>2</sup> ).
Beryllium	Building 121	10 biased (interior)	10 biased (interior)	No contamination found, all results are less than associated action levels	OSHA ID-125G – RIN03Z1512  No results above action level (0.2ug/100cm <sup>2</sup> ) or investigative level (0.1 ug/100cm <sup>2</sup> ).



**Table E-4 Data Completeness Summary, Area 5 - Group 3 Facilities**

ANALYTE	Building/Area/ Unit	Sample Number Planned (Real & QC) <sup>A</sup>	Sample Number Taken (Real & QC)	Project Decisions (Conclusions) & Uncertainty	Comments (RIN, Analytical Method, Qualifications, etc.)
Beryllium	Building 122S	5 biased (interior)	5 biased (interior)	No contamination found, all results are less than associated action levels	OSHA ID-125G – RIN03Z1512  No results above action level (0.2ug/100cm <sup>2</sup> ) or investigative level (0.1 ug/100cm <sup>2</sup> ).
Beryllium	Building T124A	10 biased (interior)	10 biased (interior)	No contamination found, all results are less than associated action levels	OSHA ID-125G – RIN03Z1512  No results above action level (0.2ug/100cm <sup>2</sup> ) or investigative level (0.1 ug/100cm <sup>2</sup> ).
Beryllium	Building 127	5 biased (interior)	5 biased (interior)	No contamination found, all results are less than associated action levels	OSHA ID-125G – RIN03Z1512  No results above action level (0.2ug/100cm <sup>2</sup> ) or investigative level (0.1 ug/100cm <sup>2</sup> ).
Beryllium	Building 128	5 biased (interior)	5 biased (interior)	No contamination found, all results are less than associated action levels	OSHA ID-125G – RIN03Z1512  No results above action level (0.2ug/100cm <sup>2</sup> ) or investigative level (0.1 ug/100cm <sup>2</sup> ).
Radiological	Survey Area 5 Survey Unit: 119-5-001 Building 119 (interior)	25 $\alpha$ TSA (15 random and 10 biased) and 25 $\alpha$ Smears (15 random and 10 biased)  5 $\alpha$ TSA and 5 $\alpha$ Smears (Equipment)  2 QC TSA  5% scan	25 $\alpha$ TSA (15 random and 10 biased) and 25 $\alpha$ Smears (15 random and 10 biased)  5 $\alpha$ TSA and 5 $\alpha$ Smears (Equipment)  2 QC TSA  5% scan	No contamination at any location; all values below PDS unrestricted release levels	Transuranic and/or Uranium DCGLs as applicable.



**Table E-4 Data Completeness Summary, Area 5 - Group 3 Facilities**

ANALYTE	Building/Area/ Unit	Sample Number Planned (Real & QC) <sup>A</sup>	Sample Number Taken (Real & QC)	Project Decisions (Conclusions) & Uncertainty	Comments (RIN, Analytical Method, Qualifications, etc.)
Radiological	Survey Area 5 Survey Unit: T119B-5-002 Building T119B (interior)	31 $\alpha$ TSA (21 random and 10 biased) and 31 $\alpha$ Smears (21 random and 10 biased)	37 $\alpha$ TSA (21 random and 16 biased) and 37 $\alpha$ Smears (21 random and 16 biased)	No contamination at any location; all values below PDS unrestricted release levels	Transuranic and/or Uranium DCGLs as applicable.
		5 $\alpha$ TSA and 5 $\alpha$ Smears (Equipment)	5 $\alpha$ TSA and 5 $\alpha$ Smears (Equipment)		
		2 QC TSA 5% scan	3 QC TSA 5% scan		
Radiological	Survey Area 5 Survey Unit: 121-5-003 Building 121 (interior)	25 $\alpha$ TSA (15 random and 10 biased) and 25 $\alpha$ Smears (15 random and 10 biased)	25 $\alpha$ TSA (15 random and 10 biased) and 25 $\alpha$ Smears (15 random and 10 biased)	No contamination at any location; all values below PDS unrestricted release levels	Transuranic and/or Uranium DCGLs as applicable.
		10 $\alpha$ TSA and 10 $\alpha$ Smears (Equipment)	10 $\alpha$ TSA and 10 $\alpha$ Smears (Equipment)		
		2 QC TSA 5% scan	2 QC TSA 5% scan		



**Table E-4 Data Completeness Summary, Area 5 - Group 3 Facilities**

ANALYTE	Building/Area/ Unit	Sample Number Planned (Real & QC) <sup>A</sup>	Sample Number Taken (Real & QC)	Project Decisions (Conclusions) & Uncertainty	Comments (RIN, Analytical Method, Qualifications, etc.)
Radiological	Survey Area 5 Survey Unit: 122S-5-005 Building 122S (interior)	20 $\alpha$ TSA (15 random and 5 biased) and 20 $\alpha$ Smears (15 random and 5 biased)  5 $\alpha$ TSA and 5 $\alpha$ Smears (Equipment)  2 QC TSA  5% scan	20 $\alpha$ TSA (15 random and 5 biased) and 20 $\alpha$ Smears (15 random and 5 biased)  5 $\alpha$ TSA and 5 $\alpha$ Smears (Equipment)  2 QC TSA  5% scan	No contamination at any location; all values below PDS unrestricted release levels	Transuranic and/or Uranium DCGLs as applicable.
	Survey Area 5 Survey Unit: T124A-5-006 Building T124A (interior)	31 $\alpha$ TSA (21 random and 10 biased) and 31 $\alpha$ Smears (21 random and 10 biased)  10 $\alpha$ TSA and 10 $\alpha$ Smears (Equipment)  3 QC TSA  5% scan	31 $\alpha$ TSA (21 random and 10 biased) and 31 $\alpha$ Smears (21 random and 10 biased)  10 $\alpha$ TSA and 10 $\alpha$ Smears (Equipment)  3 QC TSA  5% scan	No contamination at any location; all values below PDS unrestricted release levels	Transuranic and/or Uranium DCGLs as applicable.



**Table E-4 Data Completeness Summary, Area 5 - Group 3 Facilities**

ANALYTE	Building/Area/ Unit	Sample Number Planned (Real & QC) <sup>A</sup>	Sample Number Taken (Real & QC)	Project Decisions (Conclusions) & Uncertainty	Comments (RIN, Analytical Method, Qualifications, etc.)
Radiological	Survey Area 5 Survey Unit: 127-5-007 Building 127 (interior)	20 $\alpha$ TSA (15 random and 5 biased) and 20 $\alpha$ Smears (15 random and 5 biased)	20 $\alpha$ TSA (15 random and 5 biased) and 20 $\alpha$ Smears (15 random and 5 biased)	No contamination at any location; all values below PDS unrestricted release levels	Transuranic and/or Uranium DCGLs as applicable.
		5 $\alpha$ TSA and 5 $\alpha$ Smears (Equipment)	5 $\alpha$ TSA and 5 $\alpha$ Smears (Equipment)		
		2 QC TSA 5% scan	2 QC TSA 5% scan		
Radiological	Survey Area 5 Survey Unit: 128-5-008 Building 128 (interior)	20 $\alpha$ TSA (15 random and 5 biased) and 20 $\alpha$ Smears (15 random and 5 biased)	20 $\alpha$ TSA (15 random and 5 biased) and 20 $\alpha$ Smears (15 random and 5 biased)	No contamination at any location; all values below PDS unrestricted release levels	Transuranic and/or Uranium DCGLs as applicable.
		5 $\alpha$ TSA and 5 $\alpha$ Smears (Equipment)	5 $\alpha$ TSA and 5 $\alpha$ Smears (Equipment)		
		2 QC TSA 5% scan	2 QC TSA 5% scan		

<sup>A</sup> Number of asbestos samples required is an estimate only, final number of samples is at the discretion of the IH.